

Exhibit C

41 7

SEQUENCE LISTING

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Chang, Chih-Chao

Cortesini, Raffaello

<120> Generation of Antigen-Specific T Suppressor Cells For Treatment of Rejection

<130> 0575/58332-B

<140> 09/746,311

<141> 2000-12-21

<150> PCT/US00/16594

<151> 2000-06-15

<160> 381

<170> PatentIn version 3.1

<210> 1

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 1

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
 225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
 245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
 260 265

<210> 2

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 2

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr  
 20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Ala Val Glu Ser Phe Thr Val Gln Arg Arg Val Glu  
 85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
 100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
 115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser  
 130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
 145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
 165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
 180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
 195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
 210 215 220

Lys Gly His Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
 225 230 235

<210> 3

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 3

Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr Asn Gln Glu Glu Ser  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60



Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
 65 70 75 80

Val

<210> 4

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 4

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Cys Met Thr Ala Leu Thr  
 1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
 20 25 30

Arg Pro Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His Phe Phe Asn  
 35 40 45

Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr Asn Gln Glu  
 50 55 60

Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
 65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile  
 85 90 95

Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
 100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Glu Pro Lys Val  
 115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
 130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
 145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu  
 165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
 180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
 195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
 210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
 225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
 245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
 260 265

<210> 5

<211> 225

<212> PRT

<213> Human HLA-DRB

<400> 5

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr  
 20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Asn Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Glu  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
210 215 220

Lys  
225

<210> 6

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 6

Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr Asn Gln Glu Glu Ser  
20 25 30

Val Arg Phe Asp Ser Asp Val Arg Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 7

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 7

Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr Asn Gln Glu Glu Ser  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 8

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 8

Arg Phe Leu Trp Glu Leu Lys Phe Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr Asn Gln Glu Glu Ser  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 9

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 9

Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 10

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 10

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His  
 20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
210 215 220

Lys Gly His Ser Gly Leu Gln Pro Arg Gly Phe Leu Ser  
225 230 235

<210> 11

<211> 87

<212> PRT

<213> Human HLA-DRB

<400> 11

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln  
 85

<210> 12

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 12

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His  
 20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
 85 90 95



Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
210 215 220

Lys Gly His Ser Gly Leu Gln Pro Arg Gly Phe Leu Ser  
225 230 235

<210> 13

<211> 100

<212> PRT

<213> Human HLA-DRB

<400> 13

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr  
100

<210> 14

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 14

Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg  
1 5 10 15

Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg Phe Asp  
20 25 30

Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp  
35 40 45

Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg Gly  
50 55 60

Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser Phe  
65 70 75 80

Thr Val Gln Arg Arg  
85

<210> 15

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 15

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Ser  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 16

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 16

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 17

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 17

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 18

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 18

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln  
50 55 60

Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Val  
65 70 75 80

Glu Ser Phe Thr Val Gln  
85

<210> 19

<211> 102

<212> PRT

<213> Human HLA-DRB

<400> 19

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
 85 90 95

Pro Lys Val Thr Val Tyr  
 100

<210> 20

<211> 102

<212> PRT

<213> Human HLA-DRB

<400> 20

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His  
 20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
 85 90 95

Pro Lys Val Thr Val Tyr  
 100

<210> 21

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 21

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Arg Glu Glu Asn Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys  
50 55 60

Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
65 70 75 80

Ser Phe Thr Val Gln Arg  
85

<210> 22

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 22

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
210 215 220

Lys Gly His Ser Gly Leu Gln Pro Arg Gly Phe Leu Ser  
225 230 235

<210> 23

<211> 89



<212> PRT

<213> Human HLA-DRB

<400> 23

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 24

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 24

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys  
 50 55 60

Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
 65 70 75 80

<210> 25

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 25

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 26

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 26

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Gly Arg Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 27

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 27

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Gly Arg Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 28

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 28

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Trp Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val

<210> 29

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 29

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 30

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 30

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Arg Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 31

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 31

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 32

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 32

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Ala  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
 85

<210> 33

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 33

Met Val Cys Leu Lys Phe Pro Gly Gly Ser Cys Met Ala Ala Leu Thr  
 1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
 20 25 30

Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn  
 35 40 45

Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu  
 50 55 60

Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
 65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu  
 85 90 95

Leu Glu Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
 100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Tyr Pro Glu Val  
115 120 125

Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Leu Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
260 265

<210> 34

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 34

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15



Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 35

<211> 264

<212> PRT

<213> Human HLA-DRB

<400> 35

Cys Leu Lys Phe Pro Gly Gly Ser Cys Met Ala Ala Leu Thr Val Thr  
 1 5 10 15

Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr Arg Pro  
 20 25 30

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
 35 40 45

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
 50 55 60

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 65 70 75 80

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 85 90 95

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
100 105 110

Val Glu Ser Phe Thr Val Gln Arg Arg Val Tyr Pro Glu Val Thr Val  
115 120 125

Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu Val Cys  
130 135 140

Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp Phe Arg  
145 150 155 160

Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu Ile Gln  
165 170 175

Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr Val Pro  
180 185 190

Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser Leu Thr  
195 200 205

Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala Gln Ser  
210 215 220

Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu Phe Leu  
225 230 235 240

Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His Ser Gly  
245 250 255

Leu Gln Pro Thr Gly Phe Leu Ser  
260

<210> 36

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 36

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
 20 25 30

His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Tyr  
 85 90 95

Pro Glu Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
 100 105 110

Asn Leu Leu Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu  
 115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
 130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
 145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
 165 170 175

His Pro Ser Leu Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
 180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
 195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
 210 215 220

Lys Gly His Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
 225 230 235

<210> 37

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 37

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 38

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 38

Met Val Cys Leu Lys Phe Pro Gly Gly Ser Cys Met Ala Ala Leu Thr  
 1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
 20 25 30

Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn  
 35 40 45

Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu  
 50 55 60

Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
 65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu  
 85 90 95

Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
 100 105 110

Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Tyr Pro Glu Val  
 115 120 125

Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
 130 135 140

Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
 145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu  
 165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
 180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
 195 200 205

Leu Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
 210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
 225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
 245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
 260 265

<210> 39

<211> 94

<212> PRT

<213> Human HLA-DRB

<400> 39

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
 20 25 30

His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85 90

<210> 40

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 40

Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu  
 1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val  
 20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
 35 40 45

Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln  
 50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
 65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 41

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 41

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
 20 25 30

His Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Tyr  
85 90 95

Pro Glu Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Leu Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
210 215 220

Lys Gly His Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
225 230 235

<210> 42

<211> 94

<212> PRT

<213> Human HLA-DRB

<400> 42

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His  
1 5 10 15



Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
 20 25 30

His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85 90

<210> 43

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 43

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg  
 85

<210> 44

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 44

Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln  
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 45

<211> 74

<212> PRT

<213> Human HLA-DRB

<400> 45

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg  
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly  
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp  
35 40 45

Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg Ala Ala Val Asp Thr  
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
65 70

<210> 46

<211> 84

<212> PRT

<213> Human HLA-DRB

<400> 46

Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln  
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
65 70 75 80

Glu Ser Phe Thr

<210> 47

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 47

Met Val Cys Leu Lys Phe Pro Gly Gly Ser Cys Met Ala Ala Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
20 25 30

Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu  
50 55 60

Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu  
85 90 95

Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Tyr Pro Glu Val  
115 120 125

Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Leu Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
 210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
 225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
 245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
 260 265

<210> 48

<211> 87

<212> PRT

<213> Human HLA-DRB

<400> 48

Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu  
 1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val  
 20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
 35 40 45

Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp  
 50 55 60

Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
 65 70 75 80

Glu Ser Phe Thr Val Gln Arg  
 85

<210> 49

<211> 78

<212> PRT

<213> Human HLA-DRB

<400> 49

His Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp  
1 5 10 15

Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val  
20 25 30

Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr  
35 40 45

Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg Ala Ala Val Asp  
50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser Phe Thr  
65 70 75

<210> 50

<211> 74

<212> PRT

<213> Human HLA-DRB

<400> 50

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg  
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly  
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp  
35 40 45

Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr  
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
65 70

<210> 51

<211> 82

<212> PRT

<213> Human HLA-DRB

<400> 51

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu

<210> 52

<211> 73

<212> PRT

<213> Human HLA-DRB

<400> 52

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg  
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly  
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Gln Tyr Trp  
35 40 45

Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg Ala Ala Val Asp Thr  
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70

<210> 53

<211> 73

<212> PRT

<213> Human HLA-DRB

<400> 53

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg  
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly  
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp  
35 40 45

Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr  
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70

<210> 54

<211> 78

<212> PRT

<213> Human HLA-DRB



<400> 54

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg  
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly  
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp  
35 40 45

Asn Ser Gln Lys Asp Ile Leu Glu Asp Arg Arg Ala Leu Val Asp Thr  
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser Phe Thr Val  
65 70 75

<210> 55

<211> 79

<212> PRT

<213> Human HLA-DRB

<400> 55

His Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp  
1 5 10 15

Arg Tyr Phe Tyr His Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val  
20 25 30

Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr  
35 40 45

Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp  
50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val  
65 70 75

<210> 56

<211> 73

<212> PRT

<213> Human HLA-DRB

<400> 56

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg  
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly  
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp  
35 40 45

Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr  
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70

<210> 57

<211> 83

<212> PRT

<213> Human HLA-DRB

<400> 57

Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val  
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Ser Val Arg Phe  
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro  
35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg  
 50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu Ser  
 65 70 75 80

Phe Thr Val

<210> 58

<211> 82

<212> PRT

<213> Human HLA-DRB

<400> 58

Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val  
 1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe  
 20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro  
 35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg  
 50 55 60

Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser  
 65 70 75 80

Phe Thr

<210> 59

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 59

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Arg Phe Thr Val Gln Arg Arg  
85

<210> 60

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 60

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Arg Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 61

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 61

Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
 1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg  
 20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg  
 35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg  
 50 55 60

Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
 65 70 75 80

<210> 62

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 62

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Thr Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly

<210> 63

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 63

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
 65 70 75 80

Val Glu Ser Phe Thr Val  
 85

<210> 64

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 64

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 65

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 65

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Met Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 66

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 66

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Val Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 67

<211> 89



<212> PRT

<213> Human HLA-DRB

<400> 67

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 68

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 68

Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg  
 50 55 60

Gln Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
 65 70 75 80

<210> 69

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 69

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
 20 25 30

Val His Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly

<210> 70

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 70

Phe Leu Glu Gln Val Lys Pro Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln  
50 55 60

Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

<210> 71

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 71

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val  
85

<210> 72

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 72

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 73

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 73

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 74

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 74

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 75

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 75

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Asp Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
85

<210> 76

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 76

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Gly Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
 85

<210> 77

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 77

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
 85

<210> 78

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 78

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 79

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 79

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Cys Met Ala Ala Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
20 25 30

Gln Pro Arg Phe Leu Trp Gln Gly Lys Tyr Lys Cys His Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Gln Phe Leu Glu Arg Leu Phe Tyr Asn Gln Glu  
50 55 60



Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile  
85 90 95

Leu Glu Asp Arg Arg Gly Gln Val Asp Thr Val Cys Arg His Asn Tyr  
100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Glu Val  
115 120 125

Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Met Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
260 265

<210> 80

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 80

Arg Phe Leu Trp Gln Gly Lys Tyr Lys Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Gln Phe Leu Glu Arg Leu Phe Tyr Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Arg Arg Gly Gln Val Asp Thr Val Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly

<210> 81

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 81

Arg Phe Leu Trp Gln Gly Lys Tyr Lys Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Gln Phe Leu Glu Ser Leu Phe Tyr Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Arg Arg Gly Gln Val Asp Thr Val Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly

<210> 82

<211> 82

<212> PRT

<213> Human HLA-DRB

<400> 82

Phe Leu Trp Gln Gly Lys Tyr Lys Cys His Phe Phe Asn Gly Thr Glu  
 1 5 10 15

Arg Val Gln Phe Leu Glu Arg Leu Phe Tyr Asn Gln Glu Glu Phe Val  
 20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
 35 40 45

Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp  
 50 55 60

Arg Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Gly  
 65 70 75 80

Glu Ser

<210> 83

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 83

Arg Phe Leu Trp Gln Gly Lys Tyr Lys Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Gln Phe Leu Glu Arg Leu Phe Tyr Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Arg Lys Asp Ile Leu Glu  
50 55 60

Asp Arg Arg Gly Gln Val Asp Thr Val Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr  
85

<210> 84

<211> 179

<212> PRT

<213> Human HLA-DRB

<400> 84

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
 85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
 100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
 115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
 130 135 140

Thr Gly Leu Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
 145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
 165 170 175

His Pro Ser

<210> 85

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 85

Met Val Cys Leu Arg Leu Pro Gly Gly Ser Cys Met Ala Val Leu Thr  
 1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
 20 25 30

Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn  
 35 40 45

Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu  
50 55 60

Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe  
85 90 95

Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Ser Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
260 265

<210> 86

<211> 183

<212> PRT

<213> Human HLA-DRB

<400> 86

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Lys Val Thr Val  
85 90 95

Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu Val Cys  
100 105 110

Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp Phe Arg  
115 120 125

Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu Ile His  
130 135 140

Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr Val Pro  
145 150 155 160

Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser Val Thr  
165 170 175

Ser Pro Leu Thr Val Glu Trp  
180

<210> 87

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 87

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val  
85

<210> 88

<211> 188

<212> PRT

<213> Human HLA-DRB

<400> 88

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr  
1 5 10 15



Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Ile Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp  
180 185

<210> 89

<211> 101

<212> PRT

<213> Human HLA-DRB

<400> 89

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
 20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
 85 90 95

Pro Lys Val Thr Val  
 100

<210> 90

<211> 76

<212> PRT

<213> Human HLA-DRB

<400> 90

Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn  
 1 5 10 15

Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala  
 20 25 30

Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys  
 35 40 45

Asp Phe Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His  
 50 55 60

Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg  
 65 70 75

<210> 91

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 91

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 92

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 92

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 93

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 93

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly

<210> 94

<211> 90

<212> PRT

<213> Human HLA-DRB

<400> 94

Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly  
1 5 10 15

Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu  
20 25 30

Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu  
35 40 45

Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu  
50 55 60

Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly  
65 70 75 80

Val Val Glu Ser Phe Thr Val Gln Arg Arg  
85 90

<210> 95

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 95

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Val Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val  
 85

<210> 96

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 96

Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu Arg  
 1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg  
 20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg  
 35 40 45

Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg  
 50 55 60

Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
 65 70 75 80

<210> 97

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 97

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 98

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 98

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 99

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 99

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Ala Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val  
 85

<210> 100

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 100



Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 101

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 101

Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu Arg  
 1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg  
 20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg  
 35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Asp Arg  
 50 55 60

Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
 65 70 75 80

<210> 102

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 102

Arg Phe Leu Glu Tyr Ser Arg Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val  
85

<210> 103

<211> 84

<212> PRT

<213> Human HLA-DRB

<400> 103

Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu His Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp  
50 55 60

Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu Ser Phe Thr

<210> 104

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 104

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Asp  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 105

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 105

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly

<210> 106

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 106

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 107

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 107

Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Ile Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp  
50 55 60

Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu Ser Phe Thr Val  
85

<210> 108

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 108

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 109

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 109

Arg Phe Leu Glu Tyr Ser Met Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 110

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 110

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 111

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 111

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Arg Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 112

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 112

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80



Gly Glu Ser Phe Thr Val Gln Arg  
85

<210> 113

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 113

Gly Asp Thr Gln Pro Arg Phe Leu Lys Gln Asp Lys Phe Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu His Arg Gly Ile Tyr  
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln  
50 55 60

Lys Asp Phe Leu Glu Arg Arg Arg Ala Glu Val Asp Thr Val Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Glu Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Met Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
210 215 220

Lys Gly His Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
225 230 235

<210> 114

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 114

Met Val Cys Leu Arg Leu Pro Gly Gly Ser Cys Met Ala Val Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
20 25 30

Arg Pro Arg Phe Leu Glu Glu Val Lys Phe Glu Cys His Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Arg Val His Asn Gln Glu  
50 55 60

Glu Tyr Ala Arg Tyr Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu  
85 90 95

Leu Glu Arg Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Gln Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Gln Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Met Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Pro Pro Thr Gly Phe Leu Ser  
260 265

<210> 115

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 115

Arg Phe Leu Glu Glu Val Lys Phe Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg Arg Val His Asn Gln Glu Glu Tyr  
 20 25 30

Ala Arg Tyr Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Arg Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 116

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 116

Met Val Cys Leu Arg Leu Pro Gly Gly Ser Cys Met Ala Val Leu Thr  
 1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
 20 25 30

Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn  
 35 40 45

Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu  
 50 55 60

Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr  
 65 70 75 80

Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe  
85 90 95

Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Arg Gly Phe Leu Ser  
260 265

<210> 117

<211> 101

<212> PRT

<213> Human HLA-DRB

<400> 117

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val  
100

<210> 118

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 118

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 119

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 119

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 120

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 120

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Phe Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205



Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
 210 215 220

Lys Gly His Ser Gly Leu Gln Pro Arg Gly Phe Leu Ser  
 225 230 235

<210> 121

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 121

Met Val Cys Leu Arg Leu Pro Gly Gly Ser Cys Met Ala Val Leu Thr  
 1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
 20 25 30

Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn  
 35 40 45

Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu  
 50 55 60

Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr  
 65 70 75 80

Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe  
 85 90 95

Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
 100 105 110

Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Lys Val  
 115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
 130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
 145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu  
 165 170 175

Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
 180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
 195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
 210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
 225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
 245 250 255

Ser Gly Leu Gln Pro Arg Gly Phe Leu Ser  
 260 265

<210> 122

<211> 94

<212> PRT

<213> Human HLA-DRB

<400> 122

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
 20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg  
85 90

<210> 123

<211> 103

<212> PRT

<213> Human HLA-DRB

<400> 123

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val Tyr Pro  
100

<210> 124

<211> 90

<212> PRT

<213> Human HLA-DRB

<400> 124

Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys His Phe Phe Asn Gly  
1 5 10 15

Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu  
20 25 30

Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu  
35 40 45

Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu  
50 55 60

Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly  
65 70 75 80

Val Gly Glu Ser Phe Thr Val Gln Arg Arg  
85 90

<210> 125

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 125

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
65 70 75 80

Val Glu Ser Phe Thr  
85

<210> 126

<211> 87

<212> PRT

<213> Human HLA-DRB

<400> 126

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys  
50 55 60

Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
65 70 75 80

Ser Phe Thr Val Gln Arg Arg  
85

<210> 127

<211> 79

<212> PRT

<213> Human HLA-DRB

<400> 127

Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp  
1 5 10 15

Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val  
20 25 30

Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr  
35 40 45

Trp Asn Ser Gln Lys Asp Leu Leu Glu Asp Arg Arg Ala Ala Val Asp  
50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val  
65 70 75

<210> 128

<211> 79

<212> PRT

<213> Human HLA-DRB

<400> 128

Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp  
1 5 10 15

Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val  
20 25 30

Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr  
35 40 45

Trp Asn Ser Gln Lys Asp Leu Leu Glu Asp Arg Arg Ala Ala Val Asp  
50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val  
65 70 75

<210> 129

<211> 77

<212> PRT

<213> Human HLA-DRB

<400> 129

His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe  
1 5 10 15

His Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe  
20 25 30

Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser  
35 40 45

Gln Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys  
50 55 60

Arg His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln  
65 70 75

<210> 130

<211> 73

<212> PRT

<213> Human HLA-DRB

<400> 130

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg  
1 5 10 15

Tyr Phe His Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly  
20 25 30

Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp  
35 40 45

Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr  
 50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly  
 65 70

<210> 131

<211> 79

<212> PRT

<213> Human HLA-DRB

<400> 131

Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp  
 1 5 10 15

Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val  
 20 25 30

Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr  
 35 40 45

Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Glu Arg Ala Ala Val Asp  
 50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val  
 65 70 75

<210> 132

<211> 73

<212> PRT

<213> Human HLA-DRB

<400> 132

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg  
 1 5 10 15



Tyr Phe Tyr Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly  
20 25 30

Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp  
35 40 45

Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr  
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70

<210> 133

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 133

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 134

<211> 94

<212> PRT

<213> Human HLA-DRB

<400> 134

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Arg Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg  
85 90

<210> 135

<211> 93

<212> PRT

<213> Human HLA-DRB

<400> 135

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg  
85 90

<210> 136

<211> 112

<212> PRT

<213> Human HLA-DRB

<400> 136

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gln Glu Glu Asp Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

<210> 137

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 137

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 138

<211> 112

<212> PRT

<213> Human HLA-DRB

<400> 138

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

<210> 139

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 139

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp  
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 140

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 140

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp  
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 141

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 141

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu  
 50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
 65 70 75 80

Ser Phe Thr Val Gln  
 85

<210> 142

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 142

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
 1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg  
 20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
 35 40 45

Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu  
 50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala Val Glu  
 65 70 75 80

<210> 143

<211> 82

<212> PRT

<213> Human HLA-DRB

<400> 143

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu

<210> 144

<211> 82

<212> PRT

<213> Human HLA-DRB

<400> 144

Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly  
 1 5 10 15

Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu  
 20 25 30

Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu  
 35 40 45

Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu  
 50 55 60

Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly  
 65 70 75 80



Val Gly

<210> 145

<211> 83

<212> PRT

<213> Human HLA-DRB

<400> 145

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Asp Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp  
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu Ser Phe

<210> 146

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 146

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 147

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 147

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
 1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg  
 20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
 35 40 45

Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg  
 50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
 65 70 75 80

<210> 148

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 148

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp  
50 55 60

Arg Arg Ala Ala Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu

<210> 149

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 149

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 150

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 150

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 151

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 151

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 152

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 152

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 153

<211> 120

<212> PRT

<213> Human HLA-DRB

<400> 153

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
 20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu His Trp Asn Ser Gln  
 50 55 60

Lys Asp Ile Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
 85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
 100 105 110

Asn Leu Leu Val Cys Ser Val Ser  
 115 120

<210> 154

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 154

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Val Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 155

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 155

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Asp Glu Asp Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg  
 50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
 65 70 75 80

Ser Phe Thr Val Gln Arg  
 85

<210> 156

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 156

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 157

<211> 86

<212> PRT

<213> Human HLA-DRB



<400> 157

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Asp Glu Asp Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg  
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
65 70 75 80

Ser Phe Thr Val Gln Arg  
85

<210> 158

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 158

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 159

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 159

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 160

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 160

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Glu Gly Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 161

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 161

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Arg Glu Leu  
 35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 162

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 162

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val

<210> 163

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 163

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp  
50 55 60

Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 164

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 164

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 165

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 165

Met Val Cys Leu Arg Leu Pro Gly Gly Ser Cys Met Ala Val Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
20 25 30

Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu  
50 55 60

Glu Leu Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile  
85 90 95

Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Ala Val Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
 180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
 195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
 210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
 225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
 245 250 255

Ser Gly Leu Gln Pro Arg Gly Phe Leu Ser  
 260 265

<210> 166

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 166

Met Val Cys Leu Arg Leu Pro Gly Gly Ser Cys Met Ala Val Leu Thr  
 1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
 20 25 30

Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn  
 35 40 45

Gly Thr Glu Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu  
 50 55 60

Glu Leu Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr  
 65 70 75 80

Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile  
85 90 95

Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Ala Val Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Arg Gly Phe Leu Ser  
260 265

<210> 167

<211> 81

<212> PRT

<213> Human HLA-DRB



<400> 167

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Leu  
20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
65 70 75 80

Val

<210> 168

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 168

Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Leu Leu  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp  
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala Val  
 65 70 75 80

Glu

<210> 169

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 169

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Leu  
 20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
 85

<210> 170

<211> 78

<212> PRT

<213> Human HLA-DRB

<400> 170

Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu Arg Val  
 1 5 10 15

Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Leu Leu Arg Phe  
 20 25 30

Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro  
 35 40 45

Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Arg Arg  
 50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala Val  
 65 70 75

<210> 171

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 171

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Phe  
 20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 172

<211> 209

<212> PRT

<213> Human HLA-DRB

<400> 172

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg His Phe His  
20 25 30

Asn Gln Glu Glu Leu Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln  
50 55 60

Lys Asp Ile Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Ala Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
 180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
 195 200 205

Gly

<210> 173

<211> 174

<212> PRT

<213> Human HLA-DRB

<400> 173

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Leu  
 20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile Leu Gly  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Lys Val Thr Val  
 85 90 95

Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu Val Cys  
 100 105 110

Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp Phe Arg  
 115 120 125

Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu Ile His  
130 135 140

Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr Val Pro  
145 150 155 160

Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
165 170

<210> 174

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 174

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Leu  
20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 175

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 175

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
 210 215 220

Lys Gly His Ser Gly Leu Gln Pro Arg Gly Phe Leu Ser  
 225 230 235

<210> 176

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 176

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 177

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 177



Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His  
 20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
 85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
 100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
 115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
 130 135 140

Thr Gly Leu Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
 145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
 165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
 180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
 195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
 210 215 220

Lys Gly His Ser Gly Leu Gln Pro Arg Gly Phe Leu Ser  
 225 230 235

<210> 178

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 178

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg  
 85

<210> 179

<211> 101

<212> PRT

<213> Human HLA-DRB

<400> 179

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
 20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Ile Leu Glu Asp Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
 85 90 95

Pro Lys Val Thr Val  
 100

<210> 180

<211> 87

<212> PRT

<213> Human HLA-DRB

<400> 180

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
 1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg  
 20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg  
 35 40 45

Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Lys  
 50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
 65 70 75 80

Ser Phe Thr Val Gln Arg Arg  
85

<210> 181

<211> 101

<212> PRT

<213> Human HLA-DRB

<400> 181

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val  
100

<210> 182

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 182

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 183

<211> 76

<212> PRT

<213> Human HLA-DRB

<400> 183

Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr  
 1 5 10 15

Phe His Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu  
 20 25 30

Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn  
 35 40 45

Ser Gln Lys Asp Ile Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr  
 50 55 60

Cys Arg His Asn Tyr Gly Val Val Glu Ser Phe Thr  
 65 70 75

<210> 184

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 184

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 185

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 185

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 186

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 186

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
 1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val  
 20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
 35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp  
 50 55 60

Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
 65 70 75 80

Glu Ser Phe Thr Val  
 85

<210> 187

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 187

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Gln  
50 55 60

Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
65 70 75 80

Glu Ser Phe Thr Val  
85

<210> 188

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 188

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45



Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 189

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 189

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 190

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 190

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 191

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 191

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val  
 85

<210> 192

<211> 75

<212> PRT

<213> Human HLA-DRB

<400> 192

Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu  
 1 5 10 15

Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp  
 20 25 30

Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu  
 35 40 45

Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val  
 50 55 60

Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
 65 70 75

<210> 193

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 193

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 194

<211> 84

<212> PRT

<213> Human HLA-DRB

<400> 194

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
 1 5 10 15

Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn Val  
 20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
 35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp  
 50 55 60

Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
 65 70 75 80

Glu Ser Phe Thr

<210> 195

<211> 82

<212> PRT

<213> Human HLA-DRB

<400> 195

Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val  
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg Phe  
20 25 30

Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro  
35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu Arg  
50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Asp Glu Ser  
65 70 75 80

Phe Thr

<210> 196

<211> 114

<212> PRT

<213> Human HLA-DRB

<400> 196

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
 85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
 100 105 110

Asn Leu

<210> 197

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 197

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 198

<211> 108

<212> PRT

<213> Human HLA-DRB

<400> 198

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro  
100 105

<210> 199

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 199

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
 85

<210> 200

<211> 119

<212> PRT

<213> Human HLA-DRB

<400> 200

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
 20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
 65 70 75 80



His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val  
115

<210> 201

<211> 90

<212> PRT

<213> Human HLA-DRB

<400> 201

Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly  
1 5 10 15

Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu  
20 25 30

Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu  
35 40 45

Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu  
50 55 60

Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly  
65 70 75 80

Val Val Glu Ser Phe Thr Val Gln Arg Arg  
85 90

<210> 202

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 202

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg  
85

<210> 203

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 203

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
85

<210> 204

<211> 82

<212> PRT

<213> Human HLA-DRB

<400> 204

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu

<210> 205

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 205

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 206

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 206

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 207

<211> 82

<212> PRT

<213> Human HLA-DRB

<400> 207

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu  
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Arg Val Val Glu  
65 70 75 80

Ser Phe

<210> 208

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 208

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 209

<211> 84

<212> PRT

<213> Human HLA-DRB

<400> 209

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
 1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val  
 20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
 35 40 45

Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp  
 50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
 65 70 75 80

Glu Ser Phe Thr

<210> 210

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 210

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Val Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 211

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 211

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 212

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 212

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Lys Arg Ala Ala Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly

<210> 213

<211> 89



<212> PRT

<213> Human HLA-DRB

<400> 213

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val His Arg Arg  
85

<210> 214

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 214

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Leu Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
85

<210> 215

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 215

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 216

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 216

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 217

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 217

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly

<210> 218

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 218

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 219

<211> 87

<212> PRT

<213> Human HLA-DRB

<400> 219

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
 1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg  
 20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg  
 35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu  
 50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
 65 70 75 80

Ser Phe Thr Val Gln Arg Arg  
 85

<210> 220

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 220

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 221

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 221

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 222

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 222

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 223

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 223

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 224

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 224

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu  
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
65 70 75 80

<210> 225

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 225

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45



Gly Arg Pro Val Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 226

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 226

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 227

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 227

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 228

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 228

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg  
 85

<210> 229

<211> 94

<212> PRT

<213> Human HLA-DRB

<400> 229

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His  
 20 25 30

Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg  
 85 90

<210> 230

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 230

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val

<210> 231

<211> 94

<212> PRT

<213> Human HLA-DRB

<400> 231

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His  
 20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg  
85 90

<210> 232

<211> 94

<212> PRT

<213> Human HLA-DRB

<400> 232

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg  
85 90

<210> 233

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 233

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 234

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 234

Phe Leu Glu Tyr Ser Thr Ser Glu Cys Gln Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg  
50 55 60

Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 235

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 235

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln  
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 236

<211> 78

<212> PRT

<213> Human HLA-DRB

<400> 236

Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val  
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val Arg Phe  
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro  
35 40 45

Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg Arg Arg  
50 55 60

Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75

<210> 237

<211> 87

<212> PRT

<213> Human HLA-DRB

<400> 237

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg  
50 55 60

Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
65 70 75 80

Glu Ser Phe Thr Val Gln Arg  
85

<210> 238

<211> 87

<212> PRT

<213> Human HLA-DRB



<400> 238

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln  
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu Ser Phe Thr Val Gln Arg  
85

<210> 239

<211> 87

<212> PRT

<213> Human HLA-DRB

<400> 239

Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg  
50 55 60

Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
 65 70 75 80

Glu Ser Phe Thr Val Gln Arg  
 85

<210> 240

<211> 78

<212> PRT

<213> Human HLA-DRB

<400> 240

Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu Arg Val  
 1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val Arg Phe  
 20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro  
 35 40 45

Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg Arg Arg  
 50 55 60

Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
 65 70 75

<210> 241

<211> 74

<212> PRT

<213> Human HLA-DRB

<400> 241

Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu  
 1 5 10 15

Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val  
 20 25 30

Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr  
 35 40 45

Trp Asn Ser Gln Lys Asp Leu Leu Glu Asp Arg Arg Ala Leu Val Asp  
 50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
 65 70

<210> 242

<211> 78

<212> PRT

<213> Human HLA-DRB

<400> 242

Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val  
 1 5 10 15

Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg Phe  
 20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro  
 35 40 45

Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg Arg  
 50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
 65 70 75

<210> 243

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 243

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg  
50 55 60

Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu Ser Phe Thr Val  
85

<210> 244

<211> 82

<212> PRT

<213> Human HLA-DRB

<400> 244

Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu Arg Val Arg Phe  
1 5 10 15

Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val Arg Phe Asp Ser  
20 25 30

Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala  
35 40 45

Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg Ala Leu  
50 55 60

Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser Phe Thr  
65 70 75 80

Val Gln

<210> 245

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 245

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu  
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
65 70 75 80

<210> 246

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 246

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
 85

<210> 247

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 247

Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val  
 1 5 10 15

Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg Phe  
 20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro  
 35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg Arg Arg  
 50 55 60

Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser  
 65 70 75 80

Phe Thr Val Gln Arg Arg  
 85

<210> 248

<211> 90

<212> PRT

<213> Human HLA-DRB

<400> 248

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr  
85 90

<210> 249

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 249

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Phe Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg  
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
65 70 75 80

<210> 250

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 250

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys  
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
65 70 75 80

<210> 251

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 251



Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 252

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 252

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 253

<211> 96

<212> PRT

<213> Human HLA-DRB

<400> 253

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Gln  
50 55 60

Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Lys Val Thr Val Tyr  
85 90 95

<210> 254

<211> 78

<212> PRT

<213> Human HLA-DRB

<400> 254

Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val  
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg Phe  
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro  
35 40 45

Ala Ala Glu His Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg  
50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75

<210> 255

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 255

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Gln Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 256

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 256

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 257

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 257

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
65 70 75 80

Val

<210> 258

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 258

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 259

<211> 84

<212> PRT

<213> Human HLA-DRB

<400> 259

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln  
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu Ser Phe Thr

<210> 260

<211> 84

<212> PRT

<213> Human HLA-DRB

<400> 260

Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg  
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
65 70 75 80

Glu Ser Phe Thr

<210> 261

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 261

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Arg Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 262

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 262

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
 1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg  
 20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg  
 35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg  
 50 55 60

Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
 65 70 75 80

Ser Phe Thr Val Gln Arg  
 85

<210> 263

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 263

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Arg Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80



Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 264

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 264

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
85

<210> 265

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 265

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
 20 25 30

Val Arg Phe Asp Ser Asp Val Arg Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 266

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 266

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys Gln Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 267

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 267

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Arg Arg Arg Ala Glu Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 268

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 268

Arg Phe Leu Glu Tyr Pro Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 269

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 269

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 270

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 270

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Cys Met Thr Ala Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ser Gly Asp Thr  
20 25 30

Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu  
50 55 60

Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile  
85 90 95

Leu Glu Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Gln Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Leu Asn Gly Gln Glu Glu Lys Ala Gly Met Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
260 265

<210> 271

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 271

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
85

<210> 272

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 272

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg  
85

<210> 273

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 273

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Ile Leu Glu Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Gln  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Leu Asn Gly Gln Glu Glu Lys Ala Gly Met Val Ser  
130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
210 215 220

Lys Gly His Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
225 230 235

<210> 274

<211> 73



<212> PRT

<213> Human HLA-DRB

<400> 274

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg  
1 5 10 15

Tyr Phe Tyr Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly  
20 25 30

Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp  
35 40 45

Asn Ser Gln Lys Asp Ile Leu Glu Gln Ala Arg Ala Ala Val Asp Thr  
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70

<210> 275

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 275

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly

<210> 276

<211> 98

<212> PRT

<213> Human HLA-DRB

<400> 276

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg His Phe Tyr  
20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Ile Leu Glu Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Gln  
85 90 95

Pro Lys

<210> 277

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 277

Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Gln  
50 55 60

Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
65 70 75 80

Glu Ser Phe Thr Val  
85

<210> 278

<211> 87

<212> PRT

<213> Human HLA-DRB

<400> 278

Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln  
50 55 60

Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
65 70 75 80

Glu Ser Phe Thr Val Gln Arg  
85

<210> 279

<211> 79

<212> PRT

<213> Human HLA-DRB

<400> 279

Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val  
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val Arg Phe  
20 25 30

Asp Ser Asp Val Gly Glu Phe Arg Ala Ala Thr Glu Leu Gly Arg Pro  
35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Gln Ala Arg  
50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
65 70 75

<210> 280

<211> 82

<212> PRT

<213> Human HLA-DRB

<400> 280

Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val  
 20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
 35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Gln  
 50 55 60

Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
 65 70 75 80

Glu Ser

<210> 281

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 281

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asn Ile Leu Glu  
 50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 282

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 282

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Gln Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 283

<211> 82

<212> PRT

<213> Human HLA-DRB

<400> 283

Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly  
 35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp  
 50 55 60

Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val  
 65 70 75 80

Glu Ser

<210> 284

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 284

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
 50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
 85

<210> 285

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 285

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Cys Met Thr Ala Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
20 25 30

Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu  
50 55 60

Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe  
85 90 95

Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Gln Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Leu Asn Gly Gln Glu Glu Lys Ala Gly Met Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190



Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
260 265

<210> 286

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 286

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr  
85

<210> 287

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 287

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Cys Met Thr Ala Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
20 25 30

Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu  
50 55 60

Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu  
85 90 95

Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Gln Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Leu Asn Gly Gln Glu Glu Lys Ala Gly Met Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
260 265

<210> 288

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 288

Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Asp  
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

<210> 289

<211> 262

<212> PRT

<213> Human HLA-DRB

<400> 289

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Cys Met Thr Ala Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
20 25 30

Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu  
50 55 60

Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe  
85 90 95

Leu Glu Asp Arg Ala Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Gln Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Leu Asn Gly Gln Glu Glu Lys Ala Gly Met Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Thr  
260

<210> 290

<211> 78

<212> PRT

<213> Human HLA-DRB

<400> 290

Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val  
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val Arg Phe  
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro  
35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg  
50 55 60

Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75

<210> 291

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 291

Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Arg  
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
65 70 75 80

<210> 292

<211> 86

<212> PRT

<213> Human HLA-DRB

<400> 292

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Pro Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val  
85

<210> 293

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 293

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 294

<211> 188

<212> PRT

<213> Human HLA-DRB

<400> 294

Gly Asp Thr Arg Pro Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Phe Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Gln Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Ala Leu Thr Val Glu Trp  
180 185

<210> 295

<211> 266



<212> PRT

<213> Human HLA-DRB

<400> 295

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Ser Leu Ala Ala Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Arg Leu Ala Phe Ala Gly Asp Thr  
20 25 30

Arg Pro Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu  
50 55 60

Glu Phe Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu  
85 90 95

Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Gln Val  
115 120 125

Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Ala Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
260 265

<210> 296

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 296

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Ser Leu Ala Ala Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Arg Leu Ala Phe Ala Gly Asp Thr  
20 25 30

Arg Pro Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu  
50 55 60

Glu Phe Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu  
85 90 95

Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Gln Val  
115 120 125

Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Ala Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
260 265

<210> 297

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 297

Gly Asp Thr Arg Pro Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His  
 20 25 30

Asn Gln Glu Glu Phe Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser  
 85

<210> 298

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 298

Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
 20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly

<210> 299

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 299

Gly Asp Thr Arg Pro Arg Phe Leu Glu Leu Cys Lys Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Phe Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser  
85

<210> 300

<211> 83

<212> PRT

<213> Human HLA-DRB

<400> 300

Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Phe  
 20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser

<210> 301

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 301

Arg Phe Ser Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
 20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu Leu Glu  
 50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr  
 85

<210> 302

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 302

Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asn Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg  
85

<210> 303

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 303

Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly

<210> 304

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 304

Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Tyr  
20 25 30

Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly

<210> 305

<211> 88



<212> PRT

<213> Human HLA-DRB

<400> 305

Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg  
85

<210> 306

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 306

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Ser Leu Ala Ala Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Arg Leu Ala Phe Ala Gly Asp Thr  
20 25 30

Arg Pro Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn  
35 40 45

Gly	Thr	Glu	Arg	Val	Arg	Phe	Leu	Glu	Arg	His	Phe	His	Asn	Gln	Glu		
50						55					60						
Glu	Tyr	Ala	Arg	Phe	Asp	Ser	Asp	Val	Gly	Glu	Tyr	Arg	Ala	Val	Arg		
65					70					75					80		
Glu	Leu	Gly	Arg	Pro	Asp	Ala	Glu	Tyr	Trp	Asn	Ser	Gln	Lys	Asp	Leu		
				85					90					95			
Leu	Glu	Gln	Lys	Arg	Gly	Gln	Val	Asp	Asn	Tyr	Cys	Arg	His	Asn	Tyr		
			100					105						110			
Gly	Val	Val	Glu	Ser	Phe	Thr	Val	Gln	Arg	Arg	Val	His	Pro	Gln	Val		
			115					120						125			
Thr	Val	Tyr	Pro	Ala	Lys	Thr	Gln	Pro	Leu	Gln	His	His	Asn	Leu	Leu		
			130				135						140				
Val	Cys	Ser	Val	Ser	Gly	Phe	Tyr	Pro	Gly	Ser	Ile	Glu	Val	Arg	Trp		
145					150					155					160		
Phe	Arg	Asn	Gly	Gln	Glu	Glu	Lys	Ala	Gly	Val	Val	Ser	Thr	Gly	Leu		
				165					170						175		
Ile	Gln	Asn	Gly	Asp	Trp	Thr	Phe	Gln	Thr	Leu	Val	Met	Leu	Glu	Thr		
			180					185						190			
Phe	Pro	Arg	Ser	Gly	Glu	Val	Tyr	Thr	Cys	Gln	Val	Glu	His	Pro	Ser		
			195					200						205			
Val	Thr	Ser	Pro	Leu	Thr	Val	Glu	Trp	Ser	Ala	Arg	Ser	Glu	Ser	Ala		
			210					215						220			
Gln	Ser	Lys	Met	Leu	Ser	Gly	Val	Gly	Gly	Phe	Val	Leu	Gly	Leu	Leu		
225					230					235					240		
Phe	Leu	Gly	Ala	Gly	Leu	Phe	Ile	Tyr	Phe	Arg	Asn	Gln	Lys	Gly	His		
				245					250						255		
Ser	Gly	Leu	Gln	Pro	Thr	Gly	Phe	Leu	Ser								
				260					265								

<210> 307

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 307

Gly Asp Thr Arg Pro Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg His Phe His  
20 25 30

Asn Gln Glu Glu Tyr Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Arg Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Gln Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Ser Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
210 215 220

Lys Gly His Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
225 230 235

<210> 308

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 308

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Tyr  
20 25 30

Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly

<210> 309

<211> 88

<212> PRT

<213> Human HLA-DRB

<400> 309

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Tyr  
20 25 30

Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg  
85

<210> 310

<211> 87

<212> PRT

<213> Human HLA-DRB

<400> 310

Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Ser Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu Gly Arg  
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys  
50 55 60

Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
65 70 75 80

Ser Phe Thr Val Gln Arg Arg  
85

<210> 311

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 311

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Tyr  
20 25 30

Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 312

<211> 87

<212> PRT

<213> Human HLA-DRB

<400> 312

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Tyr  
20 25 30

Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln  
85

<210> 313

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 313

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Asn  
20 25 30

Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly

<210> 314

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 314

Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
 1 5 10 15

Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Tyr Ala Arg  
 20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu Gly Arg  
 35 40 45

Pro Val Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys  
 50 55 60

Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
 65 70 75 80

<210> 315

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 315

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15



Glu Arg Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Tyr  
20 25 30

Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu  
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly

<210> 316

<211> 84

<212> PRT

<213> Human HLA-DRB

<400> 316

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Tyr  
20 25 30

Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe

<210> 317

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 317

Gly Asp Thr Arg Pro Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg His Phe His  
20 25 30

Asn Gln Glu Glu Tyr Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Gln Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Ser Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
210 215 220

Lys Gly His Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
225 230 235

<210> 318

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 318

Gly Asp Thr Arg Pro Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg His Phe His  
20 25 30

Asn Gln Glu Glu Tyr Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Arg Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Ile Leu Glu Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His  
85 90 95

Pro Gln Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
 115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser  
 130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
 145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
 165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Ser Ala Arg Ser  
 180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
 195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
 210 215 220

Lys Gly His Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
 225 230 235

<210> 319

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 319

Arg Phe Leu Gln Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Tyr  
 20 25 30

Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 320

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 320

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Tyr  
20 25 30

Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 321

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 321

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Tyr  
20 25 30

Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Arg Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Ala Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 322

<211> 188

<212> PRT

<213> Human HLA-DRB

<400> 322

Gly Asp Thr Arg Pro Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His  
20 25 30

Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His  
 85 90 95

Pro Gln Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
 100 105 110

Asn Leu Leu Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu  
 115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser  
 130 135 140

Thr Gly Leu Ile His Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
 145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
 165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp  
 180 185

<210> 323

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 323

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Phe  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 324

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 324

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg His Phe His Asn Gln Glu Glu Phe  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Val

<210> 325

<211> 84

<212> PRT

<213> Human HLA-DRB



<400> 325

Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Phe Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln  
50 55 60

Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu Ser Phe Thr

<210> 326

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 326

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Cys Met Ala Ala Leu Thr  
1 5 10 15

Val Thr Leu Thr Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
20 25 30

Gln Pro Arg Phe Leu Glu Gln Ala Lys Cys Glu Cys His Phe Leu Asn  
35 40 45

Gly Thr Glu Arg Val Trp Asn Leu Ile Arg Tyr Ile Tyr Asn Gln Glu  
50 55 60

Glu Tyr Ala Arg Tyr Asn Ser Asp Leu Gly Glu Tyr Gln Ala Val Thr  
 65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu  
 85 90 95

Leu Glu Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg Tyr Asn Tyr  
 100 105 110

Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Gln Pro Lys Val  
 115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
 130 135 140

Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
 145 150 155 160

Phe Arg Asn Ser Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu  
 165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
 180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
 195 200 205

Met Met Ser Pro Leu Thr Val Gln Trp Ser Ala Arg Ser Glu Ser Ala  
 210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
 225 230 235 240

Phe Leu Gly Thr Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
 245 250 255

Ser Gly Leu Gln Pro Thr Gly Leu Leu Ser  
 260 265

<210> 327

<211> 155

<212> PRT

<213> Human HLA-DRB

<400> 327

Glu Arg Val Trp Asn Leu Ile Arg Tyr Ile Tyr Asn Gln Glu Glu Tyr  
1 5 10 15

Ala Arg Tyr Asn Ser Asp Leu Gly Glu Tyr Gln Ala Val Thr Glu Leu  
20 25 30

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
35 40 45

Arg Arg Arg Ala Glu Val Gly Thr Tyr Cys Arg Tyr Asn Tyr Gly Val  
50 55 60

Val Glu Ser Phe Thr Val Gln Arg Arg Val Gln Pro Lys Val Thr Val  
65 70 75 80

Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu Val Cys  
85 90 95

Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp Phe Arg  
100 105 110

Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu Ile Gln  
115 120 125

Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr Val Pro  
130 135 140

Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
145 150 155

<210> 328

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 328

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Cys Met Ala Ala Leu Thr  
1 5 10 15

Val Thr Leu Thr Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
20 25 30

Gln Pro Arg Phe Leu Glu Gln Ala Lys Cys Glu Cys His Phe Leu Asn  
35 40 45

Gly Thr Glu Arg Val Trp Asn Leu Ile Arg Tyr Ile Tyr Asn Gln Glu  
50 55 60

Glu Tyr Ala Arg Tyr Asn Ser Asp Leu Gly Glu Tyr Gln Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu  
85 90 95

Leu Glu Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg Tyr Asn Tyr  
100 105 110

Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Gln Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Met Met Ser Pro Leu Thr Val Gln Trp Ser Ala Arg Ser Glu Ser Ala  
 210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
 225 230 235 240

Phe Leu Gly Thr Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
 245 250 255

Ser Gly Leu Gln Pro Thr Gly Leu Leu Ser  
 260 265

<210> 329

<211> 237

<212> PRT

<213> Human HLA-DRB

<400> 329

Gly Asp Thr Gln Pro Arg Phe Leu Glu Gln Ala Lys Cys Glu Cys His  
 1 5 10 15

Phe Leu Asn Gly Thr Glu Arg Val Trp Asn Leu Ile Arg Tyr Ile Tyr  
 20 25 30

Asn Gln Glu Glu Tyr Ala Arg Tyr Asn Ser Asp Leu Gly Glu Tyr Gln  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg  
 65 70 75 80

Tyr Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Gln  
 85 90 95

Pro Lys Val Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His  
 100 105 110

Asn Leu Leu Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Met Met Ser Pro Leu Thr Val Gln Trp Ser Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Thr Gly Leu Phe Ile Tyr Phe Arg Asn Gln  
210 215 220

Lys Gly His Ser Gly Leu Gln Pro Thr Gly Leu Leu Ser  
225 230 235

<210> 330

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 330

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Cys Met Ala Ala Leu Thr  
1 5 10 15

Val Thr Leu Thr Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
20 25 30

Gln Pro Arg Phe Leu Glu Gln Ala Lys Cys Glu Cys His Phe Leu Asn  
35 40 45

Gly Thr Glu Arg Val Trp Asn Leu Ile Arg Tyr Ile Tyr Asn Gln Glu  
50 55 60

Glu Tyr Ala Arg Tyr Asn Ser Asp Leu Gly Glu Tyr Gln Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu  
85 90 95

Leu Glu Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg Tyr Asn Tyr  
100 105 110

Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Gln Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Met Met Ser Pro Leu Thr Val Gln Trp Ser Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Thr Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu Gln Pro Thr Gly Leu Leu Ser  
260 265

<210> 331

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 331

Arg Phe Leu Glu Gln Ala Lys Cys Glu Cys His Phe Leu Asn Gly Thr  
1 5 10 15

Glu Arg Val Trp Asn Leu Ile Arg Tyr Ile Tyr Asn Gln Glu Glu Tyr  
20 25 30

Ala Arg Tyr Asn Ser Asp Leu Gly Glu Tyr Gln Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Arg Arg Arg Ala Glu Val Asp Asn Tyr Cys Arg Tyr Asn Tyr Gly Val  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 332

<211> 80

<212> PRT

<213> Human HLA-DRB

<400> 332

Leu Glu Gln Ala Lys Cys Glu Cys His Phe Leu Asn Gly Thr Glu Arg  
1 5 10 15

Val Trp Asn Leu Ile Arg Tyr Ile Tyr Asn Gln Glu Glu Tyr Ala Arg  
20 25 30



Tyr Asn Ser Asp Leu Gly Glu Tyr Gln Ala Val Thr Glu Leu Gly Arg  
 35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg Arg  
 50 55 60

Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu  
 65 70 75 80

<210> 333

<211> 38

<212> PRT

<213> Human HLA-DRB

<220>

<221> MISC\_FEATURE

<222> (38) .. (38)

<223> Where X = Unknown

<400> 333

Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr Gln Pro Arg Phe  
 1 5 10 15

Leu Glu Gln Ala Lys Cys Glu Cys His Phe Leu Asn Gly Thr Glu Pro  
 20 25 30

Asp Gln Ile His Leu Xaa  
 35

<210> 334

<211> 266

<212> PRT

<213> Human HLA-DRB

<400> 334

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Tyr Met Ala Lys Leu Thr  
1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
20 25 30

Arg Pro Arg Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Arg Phe Leu His Arg Asp Ile Tyr Asn Gln Glu  
50 55 60

Glu Asp Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe  
85 90 95

Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Glu Pro Lys Val  
115 120 125

Thr Val Tyr Pro Ala Arg Thr Gln Thr Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Ser Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Gln Ser Glu Ser Ala

210

215

220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
 225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Lys Asn Gln Lys Gly His  
 245 250 255

Ser Gly Leu His Pro Thr Gly Leu Val Ser  
 260 265

&lt;210&gt; 335

&lt;211&gt; 85

&lt;212&gt; PRT

&lt;213&gt; Human HLA-DRB

&lt;400&gt; 335

Arg Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu His Arg Asp Ile Tyr Asn Gln Glu Glu Asp  
 20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr  
 85

&lt;210&gt; 336

&lt;211&gt; 237

<212> PRT

<213> Human HLA-DRB

<400> 336

Gly Asp Thr Arg Pro Arg Phe Leu Gln Gln Asp Lys Tyr Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu His Arg Gly Ile Tyr  
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Glu  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ala Arg Thr Gln Thr Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu  
115 120 125

Val Arg Trp Phe Arg Asn Ser Gln Glu Glu Lys Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met  
145 150 155 160

Leu Glu Thr Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu  
165 170 175

His Pro Ser Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Gln Ser  
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Lys Asn Gln  
210 215 220

Lys Gly His Ser Gly Leu His Pro Thr Gly Leu Val Ser  
225 230 235

<210> 337

<211> 83

<212> PRT

<213> Human HLA-DRB

<400> 337

Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn Gly Thr Glu Arg  
1 5 10 15

Val Arg Phe Leu His Arg Gly Ile Tyr Asn Gln Glu Glu Asn Val Arg  
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg  
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Thr  
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu  
65 70 75 80

Ser Phe Thr

<210> 338

<211> 111

<212> PRT

<213> Human HLA-DRB

<400> 338

Gly Asp Thr Arg Pro Arg Phe Leu Gln Gln Asp Lys Tyr Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu His Arg Asp Ile Tyr  
20 25 30

Asn Gln Glu Glu Asp Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Glu  
85 90 95

Pro Lys Val Thr Val Tyr Pro Ala Arg Thr Gln Thr Leu Gln His  
100 105 110

<210> 339

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 339

Pro Arg Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn Gly  
1 5 10 15

Thr Glu Arg Val Arg Phe Leu His Arg Asp Ile Tyr Asn Gln Glu Glu  
20 25 30

Asp Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu  
35 40 45

Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu  
50 55 60

Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly  
65 70 75 80

Val Gly Glu Ser Phe Thr Val Gln Arg  
85

<210> 340

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 340

Arg Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu His Arg Asp Ile Tyr Asn Gln Glu Glu Asp  
20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 341

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 341

Arg Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu His Arg Asp Ile Tyr Asn Gln Glu Glu Asp  
20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu  
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
65 70 75 80

Gly

<210> 342

<211> 167

<212> PRT

<213> Human HLA-DRB

<220>

<221> MISC\_FEATURE

<222> (167)..(167)

<223> Where X = Unknown

<400> 342

Arg Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu His Arg Gly Ile Tyr Asn Gln Glu Glu Asn



20

25

30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg Val Glu Pro Lys Val Thr Val  
 85 90 95

Tyr Pro Ala Arg Thr Gln Thr Leu Gln His His Asn Leu Leu Val Cys  
 100 105 110

Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp Phe Arg  
 115 120 125

Asn Ser Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu Ile Gln  
 130 135 140

Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Arg Phe Thr  
 145 150 155 160

Pro Ala Lys Trp Ser Thr Xaa  
 165

<210> 343

<211> 81

<212> PRT

<213> Human HLA-DRB

<400> 343

Arg Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu His Arg Asp Ile Tyr Asn Gln Glu Glu Asp  
 20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
 50 55 60

Asn Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val  
 65 70 75 80

Gly

<210> 344

<211> 81

<212> PRT

<213> Human HLA-DRB

<220>

<221> MISC\_FEATURE

<222> (81)..(81)

<223> Where X = Unknown

<400> 344

Arg Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn Gly Thr  
 1 5 10 15

Glu Arg Val Arg Phe Leu His Arg Gly Ile Tyr Asn Gln Glu Glu Asn  
 20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
 35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu

50

55

60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Thr Gln Leu Arg Gly Trp  
 65 70 75 80

Xaa

&lt;210&gt; 345

&lt;211&gt; 266

&lt;212&gt; PRT

&lt;213&gt; Human HLA-DRB

&lt;400&gt; 345

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Tyr Met Ala Val Leu Thr  
 1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr  
 20 25 30

Arg Pro Cys Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn  
 35 40 45

Gly Thr Glu Arg Val Arg Phe Leu His Arg Gly Ile Tyr Asn Gln Glu  
 50 55 60

Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
 65 70 75 80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile  
 85 90 95

Leu Glu Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr  
 100 105 110

Gly Ala Val Glu Ser Phe Thr Val Gln Arg Arg Val Glu Pro Lys Val  
 115 120 125

Thr Val Tyr Pro Ala Arg Thr Gln Thr Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Ile Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Gln Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Ile Gly Gly Phe Val Leu Gly Leu Leu  
225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Lys Asn Gln Lys Gly His  
245 250 255

Ser Gly Leu His Pro Thr Gly Leu Val Ser  
260 265

<210> 346

<211> 87

<212> PRT

<213> Human HLA-DRB

<400> 346

Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn Gly Thr Glu  
1 5 10 15

Arg Val Arg Phe Leu His Arg Gly Ile Tyr Asn Gln Glu Glu Asn Val  
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly  
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Gln  
50 55 60

Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly  
65 70 75 80

Glu Ser Phe Thr Val Gln Arg  
85

<210> 347

<211> 85

<212> PRT

<213> Human HLA-DRB

<400> 347

Cys Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu His Arg Gly Ile Tyr Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu  
50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
65 70 75 80

Val Glu Ser Phe Thr  
85

<210> 348

<211> 89

<212> PRT

<213> Human HLA-DRB

<400> 348

Cys Phe Leu Gln Gln Asp Lys Tyr Glu Cys His Phe Phe Asn Gly Thr  
1 5 10 15

Glu Arg Val Arg Phe Leu His Arg Gly Ile Tyr Asn Gln Glu Glu Asn  
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu  
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu  
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala  
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg  
85

<210> 349

<211> 228

<212> PRT

<213> Swine SLA-DRA

<400> 349

Val Glu Asn His Val Ile Ile Gln Ala Glu Phe Tyr Leu Ser Pro Asp  
1 5 10 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His  
20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly  
35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val  
50 55 60

Asp Lys Ala Asn Leu Glu Ile Leu Ile Lys Arg Ser Asn Asn Thr Pro  
65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val  
85 90 95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser  
100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr  
115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe  
130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr  
145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His  
165 170 175

Trp Glu Phe Glu Ala Arg Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr  
180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly  
195 200 205

Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu Arg  
210 215 220

Arg Gly Pro Leu  
225

<210> 350

<211> 228

<212> PRT

<213> Swine SLA-DRA

<400> 350

Val Glu Asn His Val Ile Ile Gln Ala Glu Phe Tyr Leu Ser Pro Asp  
1 5 10 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His  
20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly  
35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val  
50 55 60

Asp Lys Ala Asn Leu Glu Ile Met Ile Lys Arg Ser Asn Asn Thr Pro  
65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val  
85 90 95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser  
100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr  
115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe  
130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr  
145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His  
165 170 175

Trp Glu Phe Glu Ala Gln Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr  
180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly  
195 200 205



Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu His  
210 215 220

Arg Gly Pro Leu  
225

<210> 351

<211> 228

<212> PRT

<213> Swine SLA-DRA

<400> 351

Val Glu Asn His Val Ile Ile Gln Ala Glu Phe Tyr Leu Ser Pro Asp  
1 5 10 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His  
20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly  
35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val  
50 55 60

Asp Lys Ala Asn Leu Glu Ile Leu Ile Lys Arg Ser Asn Asn Thr Pro  
65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val  
85 90 95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser  
100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr  
115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe  
130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr  
145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His  
165 170 175

Trp Glu Phe Glu Ala Gln Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr  
180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly  
195 200 205

Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu His  
210 215 220

Arg Gly Pro Leu  
225

<210> 352

<211> 228

<212> PRT

<213> Swine SLA-DRA

<400> 352

Val Glu Asn His Val Ile Ile Gln Ala Glu Phe Tyr Leu Ser Pro Asp  
1 5 10 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His  
20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly  
35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val  
50 55 60

Asp Lys Ala Asn Leu Glu Ile Leu Ile Lys Arg Ser Asn Asn Thr Pro  
65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val  
85 90 95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser  
100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr  
115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe  
130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr  
145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His  
165 170 175

Trp Glu Phe Glu Ala Gln Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr  
180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly  
195 200 205

Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu Arg  
210 215 220

Arg Gly Pro Leu  
225

<210> 353

<211> 228

<212> PRT

<213> Swine SLA-DRA

<400> 353

Val Glu Asn His Val Ile Ile Gln Ala Glu Phe Tyr Leu Ser Pro Asp  
1 5 10 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His  
 20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly  
 35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val  
 50 55 60

Asp Lys Ala Asn Leu Glu Ile Met Ile Lys Arg Ser Asn Asn Thr Pro  
 65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val  
 85 90 95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser  
 100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr  
 115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe  
 130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr  
 145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His  
 165 170 175

Trp Glu Phe Glu Ala Gln Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr  
 180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly  
 195 200 205

Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu Arg  
 210 215 220

Arg Gly Pro Leu  
 225

<210> 354

<211> 228

<212> PRT

<213> Swine SLA-DRA

<400> 354

Val Glu Asn His Val Ile Ile Gln Ala Glu Phe Tyr Leu Ser Pro Asp  
1 5 10 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His  
20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly  
35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val  
50 55 60

Asp Lys Ala Asn Leu Glu Ile Met Ile Lys Arg Ser Asn Asn Thr Pro  
65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val  
85 90 95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser  
100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr  
115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe  
130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr  
145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His  
165 170 175

Trp Glu Phe Glu Ala Gln Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr  
180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly  
195 200 205

Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu Arg  
210 215 220

Arg Gly Pro Leu  
225

<210> 355

<211> 237

<212> PRT

<213> Swine SLA-DRB

<400> 355

Arg Asp Ile Ala Gln His Phe Phe Phe Met Gly Lys Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Gln Lys Tyr Leu Tyr  
20 25 30

Asn Gly Glu Glu Phe Val Arg Phe Asp Ser Asp Leu Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Met Glu Gln Lys Arg Ala Val Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Arg Ile Leu Asp Thr Phe Leu Val Pro Arg Arg Ala Glu  
85 90 95

Pro Thr Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met  
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu  
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Ala Val Ala Gly Leu Phe Ile Tyr Phe Lys Asn Gln  
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser  
225 230 235

<210> 356

<211> 237

<212> PRT

<213> Swine SLA-DRB

<400> 356

Arg Asp Thr Pro Pro His Phe Leu Phe Leu Gly Lys Ala Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gly Asp Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Glu Val Thr Glu Phe Gly Arg Pro Asp Ala Lys Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Phe Met Glu Gln Lys Arg Ala Glu Val Asp Thr Val Cys Arg  
65 70 75 80

His Asn Tyr Glu Ile Leu Glu Thr Phe Leu Val Pro Arg Arg Ala Glu  
85 90 95

Pro Arg Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Thr Tyr Pro Gly His Val Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met  
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Thr Cys Arg Val Glu  
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Ile Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Ala Val Ala Gly Leu Phe Ile Tyr Phe Lys Asn Gln  
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser  
225 230 235

<210> 357

<211> 237

<212> PRT

<213> Swine SLA-DRB



<400> 357

Arg Asp Thr Pro Pro His Phe Leu Phe Leu Gly Lys Phe Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Gln Val Arg Leu Leu Glu Arg Gln Tyr Tyr  
20 25 30

Asn Gly Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Asn Tyr Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Arg Thr Ser Asp Thr Phe Leu Val Pro Arg Arg Ala Glu  
85 90 95

Pro Arg Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met  
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu  
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Ile Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Ala Val Ala Gly Leu Phe Ile Tyr Phe Lys Asn Gln  
 210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser  
 225 230 235

<210> 358

<211> 237

<212> PRT

<213> Swine SLA-DRB

<400> 358

Arg Asp Thr Pro Pro His Phe Leu Tyr Leu Leu Lys Phe Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Gln Tyr Tyr  
 20 25 30

Asn Gly Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Val Ala Lys Asp Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Arg Thr Ser Asp Thr Phe Leu Val Pro Arg Arg Ala Glu  
 85 90 95

Pro Arg Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
 100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu  
 115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser  
 130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met  
 145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu  
 165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser  
 180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Val Gly Gly Phe Val Leu  
 195 200 205

Gly Leu Leu Phe Ala Val Ala Gly Leu Phe Ile Tyr Phe Lys Asn Gln  
 210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser  
 225 230 235

<210> 359

<211> 237

<212> PRT

<213> Swine SLA-DRB

<400> 359

Arg Asp Thr Pro Pro His Phe Leu His Leu Leu Lys Phe Glu Cys His  
 1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Gln Tyr Tyr  
 20 25 30

Asn Gly Glu Glu Phe Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
 35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Asp Trp Asn Ser Gln  
 50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg  
 65 70 75 80

His Asn Tyr Arg Ile Leu Asp Thr Phe Leu Val Pro Arg Arg Ala Glu  
85 90 95

Pro Thr Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met  
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu  
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Ile Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Ala Val Ala Gly Leu Phe Ile Tyr Phe Lys Asn Gln  
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser  
225 230 235

<210> 360

<211> 237

<212> PRT

<213> Swine SLA-DRB

<400> 360

Arg Asp Ile Pro Pro His Phe Leu His Gln Leu Lys Phe Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Gln Arg Asn Cys Tyr  
20 25 30

Asn Gly Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Tyr Arg Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Arg Ile Leu Asp Thr Phe Leu Val Pro Arg Arg Ala Glu  
85 90 95

Pro Thr Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met  
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu  
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Ala Val Ala Gly Leu Phe Ile Tyr Phe Lys Asn Gln  
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser  
225 230 235

<210> 361

<211> 237

<212> PRT

<213> Swine SLA-DRB

<400> 361

Arg Asp Thr Pro Pro His Phe Leu His Leu Val Lys His Glu Cys Arg  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Leu Leu Leu Asp Arg Tyr Phe Tyr  
20 25 30

Asn Gly Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg  
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Ile Leu Glu Asp Ser Arg Ala Ser Val Asp Thr Tyr Cys Ile  
65 70 75 80

His Asn Tyr Arg Ile Leu Asp Thr Phe Leu Val Pro Arg Arg Ala Glu  
85 90 95

Pro Thr Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met  
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu  
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Ile Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Ala Val Ala Gly Leu Phe Ile Tyr Phe Lys Asn Gln  
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser  
225 230 235

<210> 362

<211> 237

<212> PRT

<213> Swine SLA-DRB

<400> 362

Arg Asp Ile Pro Pro His Phe Phe Phe Met Gly Lys Ser Glu Cys His  
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Leu Lys Tyr Leu Tyr  
20 25 30

Asn Gly Glu Glu Phe Val Arg Phe Asp Ser Asp Leu Gly Glu Tyr Arg  
35 40 45

Glu Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Tyr Trp Asn Ser Gln  
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Glu Lys Val Asp Thr Tyr Cys Arg  
65 70 75 80

His Asn Tyr Gly Val Ser Asp Ser Phe Leu Val Pro Arg Arg Ala Glu  
85 90 95

Pro Thr Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His  
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu  
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser  
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met  
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu  
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser  
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Val Gly Gly Phe Val Leu  
195 200 205

Gly Leu Leu Phe Ala Val Ala Gly Leu Phe Ile Tyr Phe Lys Asn Gln  
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser  
225 230 235

<210> 363

<211> 232

<212> PRT

<213> Swine SLA-DQA

<400> 363

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr  
1 5 10 15

Gln Ser Tyr Gly Pro Ser Gly Tyr Tyr Thr His Glu Phe Asp Gly Asp  
20 25 30

Glu Glu Phe Tyr Val Asp Leu Gly Lys Lys Glu Thr Val Trp Gln Leu  
35 40 45



Pro Leu Phe Ser Lys Phe Arg Ser Phe Asp Pro Gln Gly Ala Leu Arg  
50 55 60

Asn Ile Ala Thr Ala Lys His Asn Leu Asn Ile Leu Ile Lys Arg Ser  
65 70 75 80

Asn Asn Thr Ala Ala Val Asn Gln Val Pro Glu Val Thr Val Phe Pro  
85 90 95

Lys Ser Pro Val Met Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val  
100 105 110

Asp Asn Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly  
115 120 125

His Ser Val Thr Glu Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn  
130 135 140

Asp His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp  
145 150 155 160

Asp Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro  
165 170 175

Leu Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu  
180 185 190

Thr Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly  
195 200 205

Ile Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly Gly  
210 215 220

Pro Ser Arg His Gln Gly Ser Leu  
225 230

<210> 364

<211> 232

<212> PRT

<213> Swine SLA-DQA

<400> 364

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr  
1 5 10 15

Gln Ser Tyr Gly Pro Ser Gly Tyr Tyr Thr His Glu Phe Asp Gly Asp  
20 25 30

Glu Glu Phe Tyr Val Asp Leu Gly Lys Lys Glu Thr Val Trp Gln Leu  
35 40 45

Pro Leu Phe Ser Lys Phe Arg Ser Phe Asp Pro Gln Gly Ala Leu Arg  
50 55 60

Asn Ile Ala Thr Ala Lys His Asn Leu Asn Ile Leu Ile Lys Arg Ser  
65 70 75 80

Asn Asn Thr Ala Ala Val Asn Gln Val Pro Glu Val Thr Val Phe Pro  
85 90 95

Lys Ser Pro Val Met Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val  
100 105 110

Asp Asn Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly  
115 120 125

His Ser Val Thr Glu Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn  
130 135 140

Asp His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp  
145 150 155 160

Asp Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro  
165 170 175

Leu Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu  
180 185 190

Thr Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly  
195 200 205

Ile Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly Gly  
 210 215 220

Pro Ser Arg His Gln Gly Ser Leu  
 225 230

<210> 365

<211> 232

<212> PRT

<213> Swine SLA-DQA

<400> 365

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr  
 1 5 10 15

Gln Ser Tyr Gly Pro Ser Gly Tyr Tyr Thr His Glu Phe Asp Gly Asp  
 20 25 30

Glu Glu Phe Tyr Val Asp Leu Gly Lys Lys Glu Thr Val Trp Gln Leu  
 35 40 45

Pro Leu Phe Ser Lys Phe Arg Ser Phe Asp Pro Gln Gly Ala Leu Arg  
 50 55 60

Asn Ile Ala Thr Ala Lys His Asn Leu Asn Ile Leu Ile Lys Arg Ser  
 65 70 75 80

Asn Asn Thr Ala Ala Val Asn Gln Val Pro Glu Val Thr Val Phe Pro  
 85 90 95

Lys Ser Pro Val Met Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val  
 100 105 110

Asp Asn Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly  
 115 120 125

His Ser Val Thr Glu Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn  
 130 135 140

Asp His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp  
 145 150 155 160

Asp Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro  
 165 170 175

Leu Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu  
 180 185 190

Thr Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly  
 195 200 205

Ile Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly Gly  
 210 215 220

Pro Ser Arg His Gln Gly Ser Leu  
 225 230

<210> 366

<211> 232

<212> PRT

<213> Swine SLA-DQA

<400> 366

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr  
 1 5 10 15

Gln Ser Tyr Gly Pro Ser Gly Tyr Tyr Thr His Glu Phe Asp Gly Asp  
 20 25 30

Glu Glu Phe Tyr Val Asp Leu Glu Lys Lys Glu Thr Val Trp Gln Leu  
 35 40 45

Pro Leu Phe Ser Lys Phe Thr Ser Phe Asp Pro Gln Gly Ala Leu Arg  
 50 55 60

Asn Ile Ala Thr Ala Lys His Asn Leu Asn Ile Leu Ile Lys Arg Ser  
 65 70 75 80

Asn Asn Thr Ala Ala Val Asn Gln Val Pro Glu Val Thr Val Phe Pro  
85 90 95

Lys Ser Pro Val Met Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val  
100 105 110

Asp Asn Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly  
115 120 125

His Ser Val Thr Glu Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn  
130 135 140

Asp His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp  
145 150 155 160

Asp Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro  
165 170 175

Leu Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu  
180 185 190

Thr Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly  
195 200 205

Ile Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly Gly  
210 215 220

Pro Ser Arg His Gln Gly Ser Leu  
225 230

<210> 367

<211> 231

<212> PRT

<213> Swine SLA-DQA

<400> 367

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr  
1 5 10 15

Gln Ser Tyr Gly Pro Arg Gly Tyr Tyr Thr His Glu Phe Asp Gly Asp  
 20 25 30

Glu Gln Phe Tyr Val Asp Leu Glu Lys Lys Glu Thr Val Trp Arg Leu  
 35 40 45

Pro Leu Phe Ser Glu Phe Thr Ser Phe Asp Pro Gln Gly Ala Leu Arg  
 50 55 60

Asn Ile Ala Thr Leu Lys His Asn Leu Asn Ile Val Thr Lys Arg Ser  
 65 70 75 80

Asn Asn Thr Ala Ala Val Asn Lys Val Pro Glu Val Thr Val Phe Ser  
 85 90 95

Lys Ser Pro Val Ile Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val  
 100 105 110

Asp Ser Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly  
 115 120 125

His Ser Val Lys Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn Asp  
 130 135 140

His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp Asp  
 145 150 155 160

Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro Leu  
 165 170 175

Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu Thr  
 180 185 190

Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly Ile  
 195 200 205

Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly Gly Pro  
 210 215 220

Ser Arg His Gln Gly Ser Leu  
 225 230

<210> 368

<211> 231

<212> PRT

<213> Swine SLA-DQA

<400> 368

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr  
1 5 10 15

Gln Ser Tyr Gly Pro Arg Gly Tyr Phe Thr His Glu Phe Asp Gly Asp  
20 25 30

Glu Gln Phe Tyr Val Asp Leu Glu Lys Lys Glu Thr Val Trp Arg Leu  
35 40 45

Pro Leu Phe Ser Glu Phe Thr Ser Phe Asp Pro Gln Gly Ala Leu Arg  
50 55 60

Asn Ile Ala Thr Leu Lys His Asn Leu Asn Ile Val Thr Lys Arg Ser  
65 70 75 80

Asn Asn Thr Ala Ala Val Asn Lys Val Pro Glu Val Thr Val Phe Ser  
85 90 95

Lys Ser Pro Val Ile Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val  
100 105 110

Asp Ser Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly  
115 120 125

His Ser Val Lys Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn Asp  
130 135 140

His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp Asp  
145 150 155 160

Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro Leu  
165 170 175

Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu Thr  
180 185 190

Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly Ile  
195 200 205

Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly Gly Pro  
210 215 220

Ser Arg His Gln Gly Ser Leu  
225 230

<210> 369

<211> 231

<212> PRT

<213> Swine SLA-DQA

<400> 369

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr  
1 5 10 15

Gln Ser Tyr Gly Pro Ser Gly Tyr Phe Thr His Glu Phe Asp Gly Asp  
20 25 30

Glu Glu Phe Tyr Val Asp Leu Glu Lys Lys Glu Thr Val Trp Arg Leu  
35 40 45

Pro Leu Phe Ser Glu Phe Thr Ser Phe Asp Pro Gln Gly Ala Leu Arg  
50 55 60

Asn Ile Ala Thr Leu Lys His Asn Leu Asn Ile Val Thr Lys Arg Ser  
65 70 75 80

Asn Asn Thr Ala Ala Val Asn Gln Val Pro Glu Val Thr Val Phe Ser  
85 90 95

Lys Ser Pro Val Ile Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val  
100 105 110



Asp Ser Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly  
 115 120 125

His Ser Val Lys Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn Asp  
 130 135 140

His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp Asp  
 145 150 155 160

Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro Leu  
 165 170 175

Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu Thr  
 180 185 190

Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly Ile  
 195 200 205

Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Leu Ser Gly Gly Pro  
 210 215 220

Ser Arg His Gln Gly Ser Leu  
 225 230

<210> 370

<211> 230

<212> PRT

<213> Swine SLA-DQB

<400> 370

Gly Arg Asp Ser Pro Gln Asp Phe Val Val Gln Phe Lys Gly Glu Cys  
 1 5 10 15

Tyr Phe Tyr Asn Gly Thr Gln Arg Val Trp Ser Val Asp Arg Tyr Ile  
 20 25 30

Tyr Asn Gln Glu Glu Phe Leu Arg Phe Asp Ser Asp Met Gly Glu Tyr  
 35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Asp Ala Phe Tyr Leu Asn Gly  
50 55 60

Gln Lys Glu Ala Leu Glu Gln Lys Arg Ala Glu Leu Asp Thr Val Cys  
65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val  
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His  
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val  
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val  
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val  
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val  
165 170 175

Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln  
180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val  
195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser  
210 215 220

Gln Lys Gly Leu Val Arg  
225 230

<210> 371

<211> 230

<212> PRT

<213> Swine SLA-DQB

<400> 371

Gly Arg Asp Ser Pro Gln Asp Phe Val Phe Gln Phe Lys Gly Glu Cys  
1 5 10 15

Tyr Phe Tyr Asn Gly Thr Gln Arg Val Trp Ser Val Asp Arg Tyr Ile  
20 25 30

Tyr Asn Gln Glu Glu Phe Leu Arg Phe Asp Ser Asp Met Gly Glu Tyr  
35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Asp Ala Asp Tyr Leu Asn Gly  
50 55 60

Gln Lys Glu Ala Leu Glu Gln Lys Arg Ala Glu Leu Asp Thr Val Cys  
65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val  
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His  
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val  
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val  
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val  
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val  
165 170 175

Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln  
180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val  
195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser  
 210 215 220

Gln Lys Gly Leu Val Arg  
 225 230

<210> 372

<211> 230

<212> PRT

<213> Swine SLA-DQB

<400> 372

Gly Arg Asp Ser Pro Gln Asp Phe Val Tyr Gln Phe Lys Phe Glu Cys  
 1 5 10 15

Tyr Phe Phe Asn Gly Thr Gln Arg Val Arg Gly Val Ala Arg Trp Val  
 20 25 30

Tyr Asn Gln Glu Glu His Val Arg Phe Asp Ser Asp Val Gly Glu Phe  
 35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Thr Ala Asp Tyr Trp Asn Gly  
 50 55 60

Gln Lys Asp Val Leu Glu Gln Lys Arg Ala Glu Val Asp Thr Val Cys  
 65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val  
 85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His  
 100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val  
 115 120 125

Lys Val Gln Trp Asn Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val  
 130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val  
 145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val  
 165 170 175

Glu His Ser Ser Leu Gln Asn Pro Ile Leu Val Glu Trp Arg Ala Gln  
 180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val  
 195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser  
 210 215 220

Gln Lys Gly Leu Val Arg  
 225 230

<210> 373

<211> 230

<212> PRT

<213> Swine SLA-DQB

<400> 373

Gly Arg Asp Ser Pro Gln Asp Phe Val Tyr Gln Phe Lys Phe Glu Cys  
 1 5 10 15

Tyr Phe Tyr Asn Gly Thr Gln Arg Val Arg Leu Val Ala Arg Trp Val  
 20 25 30

Tyr Asn Arg Glu Glu His Val Arg Phe Asp Ser Asp Val Gly Glu Phe  
 35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Asp Ala Asp Tyr Trp Asn Gly  
 50 55 60

Gln Lys Glu Val Leu Glu Gln Lys Arg Ala Glu Leu Asp Thr Val Cys  
 65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val  
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His  
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val  
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val  
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val  
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val  
165 170 175

Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln  
180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val  
195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser  
210 215 220

Gln Lys Gly Leu Val Arg  
225 230

<210> 374

<211> 230

<212> PRT

<213> Swine SLA-DQB

<400> 374

Gly Arg Asp Ser Pro Gln Asp Phe Val Tyr Gln Phe Lys Phe Glu Cys  
1 5 10 15

Tyr Phe Phe Asn Gly Thr Gln Arg Val Arg Leu Val Thr Arg Tyr Ile  
 20 25 30

Tyr Asn Gln Glu Glu Tyr Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr  
 35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Ala Ala Asp Tyr Trp Asn Ser  
 50 55 60

Gln Lys Asp Ile Leu Glu Gln Thr Arg Ala Glu Leu Asp Thr Val Cys  
 65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val  
 85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His  
 100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val  
 115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val  
 130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val  
 145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val  
 165 170 175

Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln  
 180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val  
 195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser  
 210 215 220

Gln Lys Gly Leu Val Arg  
 225 230

<210> 375

<211> 230

<212> PRT

<213> Swine SLA-DQB

<400> 375

Gly Arg Asp Ser Pro Gln Asp Phe Val Tyr Gln Phe Lys Phe Glu Cys  
1 5 10 15

Tyr Phe Phe Asn Gly Thr Gln Arg Val Arg Leu Leu Thr Arg Tyr Ile  
20 25 30

Tyr Asn Gln Glu Glu His Val Arg Phe Asp Ser Asn Val Gly Glu Tyr  
35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Asp Ala Asp Tyr Trp Asn Gly  
50 55 60

Gln Lys Asp Val Leu Glu Gln Thr Arg Ala Glu Leu Asp Thr Val Cys  
65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val  
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His  
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val  
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val  
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val  
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val  
165 170 175



Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln  
 180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val  
 195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser  
 210 215 220

Gln Lys Gly Leu Val Arg  
 225 230

<210> 376

<211> 230

<212> PRT

<213> Swine SLA-DQB

<400> 376

Gly Arg Asp Ser Pro Gln Asp Phe Val Tyr Gln Phe Lys Gly Glu Cys  
 1 5 10 15

Tyr Phe Phe Asn Gly Thr Gln Arg Val Arg His Val Thr Arg Tyr Ile  
 20 25 30

Tyr Asn Gln Glu Glu His Val Arg Phe Asp Ser Asp Val Gly Glu Phe  
 35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Asp Ala Asp Tyr Trp Asn Gly  
 50 55 60

Gln Lys Asp Phe Leu Glu Gln Thr Arg Ala Glu Leu Asp Thr Val Cys  
 65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val  
 85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His  
 100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val  
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val  
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val  
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val  
165 170 175

Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln  
180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val  
195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser  
210 215 220

Gln Lys Gly Leu Val Arg  
225 230

<210> 377

<211> 230

<212> PRT

<213> Swine SLA-DQB

<400> 377

Gly Arg Asp Ser Pro Gln Asp Phe Val Phe Gln Phe Lys Gly Glu Cys  
1 5 10 15

Tyr Phe Tyr Asn Gly Thr Gln Arg Val Arg Gly Val Ala Arg Tyr Ile  
20 25 30

Tyr Asn Gln Glu Glu His Leu Arg Phe Asp Ser Asp Val Gly Glu Phe  
35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Glu Ala Asp Ser Trp Asn Ser  
 50 55 60

Gln Lys Asp Val Leu Glu Gln Met Arg Ala Glu Val Asp Arg Val Cys  
 65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val  
 85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His  
 100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val  
 115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val  
 130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val  
 145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val  
 165 170 175

Glu His Ser Ser Leu Gln Asn Pro Ile Leu Val Glu Trp Arg Ala Gln  
 180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val  
 195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser  
 210 215 220

Gln Lys Gly Leu Val Arg  
 225 230

<210> 378

<211> 1344

<212> DNA

<213> Human Immunoglobulin-Like Transcript

<220>

<221> CDS

<222> (1)..(1344)

<223>

<400> 378

atg atc ccc acc ttc acg gct ctg ctc tgc ctc ggg ctg agt ctg ggc	48
Met Ile Pro Thr Phe Thr Ala Leu Leu Cys Leu Gly Leu Ser Leu Gly	
1 5 10 15	
ccc agg acc cac atg cag gca ggg ccc ctc ccc aaa ccc acc ctc tgg	96
Pro Arg Thr His Met Gln Ala Gly Pro Leu Pro Lys Pro Thr Leu Trp	
20 25 30	
gct gag cca ggc tct gtg atc agc tgg ggg aac tct gtg acc atc tgg	144
Ala Glu Pro Gly Ser Val Ile Ser Trp Gly Asn Ser Val Thr Ile Trp	
35 40 45	
tgt cag ggg acc ctg gag gct cgg gag tac cgt ctg gat aaa gag gaa	192
Cys Gln Gly Thr Leu Glu Ala Arg Glu Tyr Arg Leu Asp Lys Glu Glu	
50 55 60	
agc cca gca ccc tgg gac aga cag aac cca ctg gag ccc aag aac aag	240
Ser Pro Ala Pro Trp Asp Arg Gln Asn Pro Leu Glu Pro Lys Asn Lys	
65 70 75 80	
gcc aga ttc tcc atc cca tcc atg aca gag gac tat gca ggg aga tac	288
Ala Arg Phe Ser Ile Pro Ser Met Thr Glu Asp Tyr Ala Gly Arg Tyr	
85 90 95	
cgc tgt tac tat cgc agc cct gta ggc tgg tca cag ccc agt gac ccc	336
Arg Cys Tyr Tyr Arg Ser Pro Val Gly Trp Ser Gln Pro Ser Asp Pro	
100 105 110	
ctg gag ctg gtg atg aca gga gcc tac agt aaa ccc acc ctt tca gcc	384
Leu Glu Leu Val Met Thr Gly Ala Tyr Ser Lys Pro Thr Leu Ser Ala	
115 120 125	
ctg ccg agt cct ctt gtg acc tca gga aag agc gtg acc ctg ctg tgt	432
Leu Pro Ser Pro Leu Val Thr Ser Gly Lys Ser Val Thr Leu Leu Cys	
130 135 140	
cag tca cgg agc cca atg gac act ttc ctt ctg atc aag gag cgg gca	480
Gln Ser Arg Ser Pro Met Asp Thr Phe Leu Leu Ile Lys Glu Arg Ala	
145 150 155 160	
gcc cat ccc cta ctg cat ctg aga tca gag cac gga gct cag cag cac	528
Ala His Pro Leu Leu His Leu Arg Ser Glu His Gly Ala Gln Gln His	

165										170					175					
cag gct gaa ttc ccc atg agt cct gtg acc tca gtg cac ggg ggg acc	576																			
Gln Ala Glu Phe Pro Met Ser Pro Val Thr Ser Val His Gly Gly Thr																				
180 185 190																				
tac agg tgc ttc agc tca cac ggc ttc tcc cac tac ctg ctg tca cac	624																			
Tyr Arg Cys Phe Ser Ser His Gly Phe Ser His Tyr Leu Leu Ser His																				
195 200 205																				
ccc agt gac ccc ctg gag ctc ata gtc tca gga tcc ttg gag ggt ccc	672																			
Pro Ser Asp Pro Leu Glu Leu Ile Val Ser Gly Ser Leu Glu Gly Pro																				
210 215 220																				
agg ccc tca ccc aca agg tcc gtc tca aca gct gca ggc cct gag gac	720																			
Arg Pro Ser Pro Thr Arg Ser Val Ser Thr Ala Ala Gly Pro Glu Asp																				
225 230 235 240																				
cag ccc ctc atg cct aca ggg tca gtc ccc cac agt ggt ctg aga agg	768																			
Gln Pro Leu Met Pro Thr Gly Ser Val Pro His Ser Gly Leu Arg Arg																				
245 250 255																				
cac tgg gag gta ctg atc ggg gtc ttg gtg gtc tcc atc ctg ctt ctc	816																			
His Trp Glu Val Leu Ile Gly Val Leu Val Val Ser Ile Leu Leu Leu																				
260 265 270																				
tcc ctc ctc ctc ttc ctc ctc ctc caa cac tgg cgt cag gga aaa cac	864																			
Ser Leu Leu Leu Phe Leu Leu Leu Gln His Trp Arg Gln Gly Lys His																				
275 280 285																				
agg aca ttg gcc cag aga cag gct gat ttc caa cgt cct cca ggg gct	912																			
Arg Thr Leu Ala Gln Arg Gln Ala Asp Phe Gln Arg Pro Pro Gly Ala																				
290 295 300																				
gcc gag cca gag ccc aag gac ggg ggc cta cag agg agg tcc agc cca	960																			
Ala Glu Pro Glu Pro Lys Asp Gly Gly Leu Gln Arg Arg Ser Ser Pro																				
305 310 315 320																				
gct gct gac gtc cag gga gaa aac ttc tgt gct gcc gtg aag aac aca	1008																			
Ala Ala Asp Val Gln Gly Glu Asn Phe Cys Ala Ala Val Lys Asn Thr																				
325 330 335																				
cag cct gag gac ggg gtg gaa atg gac act cgg agc cca cac gat gaa	1056																			
Gln Pro Glu Asp Gly Val Glu Met Asp Thr Arg Ser Pro His Asp Glu																				
340 345 350																				
gac ccc cag gca gtg acg tat gcc aag gtg aaa cac tcc aga cct agg	1104																			
Asp Pro Gln Ala Val Thr Tyr Ala Lys Val Lys His Ser Arg Pro Arg																				
355 360 365																				
aga gaa atg gcc tct cct ccc tcc cca ctg tct ggg gaa ttc ctg gac	1152																			
Arg Glu Met Ala Ser Pro Pro Ser Pro Leu Ser Gly Glu Phe Leu Asp																				
370 375 380																				
aca aag gac aga cag gca gaa gag gac aga cag atg gac act gag gct	1200																			

Thr	Lys	Asp	Arg	Gln	Ala	Glu	Glu	Asp	Arg	Gln	Met	Asp	Thr	Glu	Ala	
385					390					395					400	
gct	gca	tct	gaa	gcc	ccc	cag	gat	gtg	acc	tac	gcc	cag	ctg	cac	agc	1248
Ala	Ala	Ser	Glu	Ala	Pro	Gln	Asp	Val	Thr	Tyr	Ala	Gln	Leu	His	Ser	
				405					410					415		
ttt	acc	ctc	aga	cag	aag	gca	act	gag	cct	cct	cca	tcc	cag	gaa	ggg	1296
Phe	Thr	Leu	Arg	Gln	Lys	Ala	Thr	Glu	Pro	Pro	Pro	Ser	Gln	Glu	Gly	
			420					425					430			
gcc	tct	cca	gct	gag	ccc	agt	gtc	tat	gcc	act	ctg	gcc	atc	cac	taa	1344
Ala	Ser	Pro	Ala	Glu	Pro	Ser	Val	Tyr	Ala	Thr	Leu	Ala	Ile	His		
		435					440				445					

<400> 379

Met Ile Pro Thr Phe Thr Ala Leu Leu Cys Leu Gly Leu Ser Leu Gly  
1 5 10 15

Pro	Arg	Thr	His	Met	Gln	Ala	Gly	Pro	Leu	Pro	Lys	Pro	Thr	Leu	Trp
			20					25					30		

Ala Glu Pro Gly Ser Val Ile Ser Trp Gly Asn Ser Val Thr Ile Trp  
35 40 45

Cys Gln Gly Thr Leu Glu Ala Arg Glu Tyr Arg Leu Asp Lys Glu Glu  
50 55 60

Ser Pro Ala Pro Trp Asp Arg Gln Asn Pro Leu Glu Pro Lys Asn Lys  
65 70 75 80

Ala Arg Phe Ser Ile Pro Ser Met Thr Glu Asp Tyr Ala Gly Arg Tyr  
85 90 95

Arg Cys Tyr Tyr Arg Ser Pro Val Gly Trp Ser Gln Pro Ser Asp Pro  
100 105 110

Leu Glu Leu Val Met Thr Gly Ala Tyr Ser Lys Pro Thr Leu Ser Ala  
115 120 125

Leu Pro Ser Pro Leu Val Thr Ser Gly Lys Ser Val Thr Leu Leu Cys  
130 135 140

Gln Ser Arg Ser Pro Met Asp Thr Phe Leu Leu Ile Lys Glu Arg Ala  
145 150 155 160

Ala His Pro Leu Leu His Leu Arg Ser Glu His Gly Ala Gln Gln His  
165 170 175

Gln Ala Glu Phe Pro Met Ser Pro Val Thr Ser Val His Gly Gly Thr  
180 185 190

Tyr Arg Cys Phe Ser Ser His Gly Phe Ser His Tyr Leu Leu Ser His  
195 200 205

Pro Ser Asp Pro Leu Glu Leu Ile Val Ser Gly Ser Leu Glu Gly Pro  
210 215 220

Arg Pro Ser Pro Thr Arg Ser Val Ser Thr Ala Ala Gly Pro Glu Asp  
225 230 235 240

Gln Pro Leu Met Pro Thr Gly Ser Val Pro His Ser Gly Leu Arg Arg  
245 250 255

His Trp Glu Val Leu Ile Gly Val Leu Val Val Ser Ile Leu Leu Leu  
260 265 270

Ser Leu Leu Leu Phe Leu Leu Leu Gln His Trp Arg Gln Gly Lys His  
275 280 285

Arg Thr Leu Ala Gln Arg Gln Ala Asp Phe Gln Arg Pro Pro Gly Ala  
290 295 300

Ala Glu Pro Glu Pro Lys Asp Gly Gly Leu Gln Arg Arg Ser Ser Pro  
305 310 315 320

Ala Ala Asp Val Gln Gly Glu Asn Phe Cys Ala Ala Val Lys Asn Thr  
325 330 335

Gln Pro Glu Asp Gly Val Glu Met Asp Thr Arg Ser Pro His Asp Glu  
 340 345 350

Asp Pro Gln Ala Val Thr Tyr Ala Lys Val Lys His Ser Arg Pro Arg  
 355 360 365

Arg Glu Met Ala Ser Pro Pro Ser Pro Leu Ser Gly Glu Phe Leu Asp  
 370 375 380

Thr Lys Asp Arg Gln Ala Glu Glu Asp Arg Gln Met Asp Thr Glu Ala  
 385 390 395 400

Ala Ala Ser Glu Ala Pro Gln Asp Val Thr Tyr Ala Gln Leu His Ser  
 405 410 415

Phe Thr Leu Arg Gln Lys Ala Thr Glu Pro Pro Pro Ser Gln Glu Gly  
 420 425 430

Ala Ser Pro Ala Glu Pro Ser Val Tyr Ala Thr Leu Ala Ile His  
 435 440 445

<210> 380

<211> 1794

<212> DNA

<213> Human Immunoglobulin-Like Transcript

<220>

<221> CDS

<222> (1)..(1794)

<223>

<400> 380

atg acc ccc atc gtc aca gtc ctg atc tgt ctc ggg ctg agt ctg ggc	48
Met Thr Pro Ile Val Thr Val Leu Ile Cys Leu Gly Leu Ser Leu Gly	
1 5 10 15	

ccc agg acc cgc gtg cag aca ggg acc atc ccc aag ccc acc ctg tgg	96
Pro Arg Thr Arg Val Gln Thr Gly Thr Ile Pro Lys Pro Thr Leu Trp	



20	25	30	
gct gag cca gac tct gtg atc acc cag ggg agt ccc gtc acc ctc agt			144
Ala Glu Pro Asp Ser Val Ile Thr Gln Gly Ser Pro Val Thr Leu Ser			
35	40	45	
tgt cag ggg agc ctt gaa gcc cag gag tac cgt cta tat agg gag aaa			192
Cys Gln Gly Ser Leu Glu Ala Gln Glu Tyr Arg Leu Tyr Arg Glu Lys			
50	55	60	
aaa tca gca tct tgg att aca cgg ata cga cca gag ctt gtg aag aac			240
Lys Ser Ala Ser Trp Ile Thr Arg Ile Arg Pro Glu Leu Val Lys Asn			
65	70	75	80
ggc cag ttc cac atc cca tcc atc acc tgg gaa cac aca ggg cga tat			288
Gly Gln Phe His Ile Pro Ser Ile Thr Trp Glu His Thr Gly Arg Tyr			
85	90	95	
ggc tgt cag tat tac agc cgc gct cgg tgg tct gag ctc agt gac ccc			336
Gly Cys Gln Tyr Tyr Ser Arg Ala Arg Trp Ser Glu Leu Ser Asp Pro			
100	105	110	
ctg gtg ctg gtg atg aca gga gcc tac cca aaa ccc acc ctc tca gcc			384
Leu Val Leu Val Met Thr Gly Ala Tyr Pro Lys Pro Thr Leu Ser Ala			
115	120	125	
cag ccc agc cct gtg gtg acc tca gga gga agg gtg acc ctc cag tgt			432
Gln Pro Ser Pro Val Val Thr Ser Gly Gly Arg Val Thr Leu Gln Cys			
130	135	140	
gag tca cag gtg gca ttt ggc ggc ttc att ctg tgt aag gaa gga gaa			480
Glu Ser Gln Val Ala Phe Gly Gly Phe Ile Leu Cys Lys Glu Gly Glu			
145	150	155	160
gat gaa cac cca caa tgc ctg aac tcc cag ccc cat gcc cgt ggg tgc			528
Asp Glu His Pro Gln Cys Leu Asn Ser Gln Pro His Ala Arg Gly Ser			
165	170	175	
tcc cgc gcc atc ttc tcc gtg ggc ccc gtg agc ccg aat cgc agg tgg			576
Ser Arg Ala Ile Phe Ser Val Gly Pro Val Ser Pro Asn Arg Arg Trp			
180	185	190	
tcg cac agg tgc tat ggt tat gac ttg aac tct ccc tat gtg tgg tct			624
Ser His Arg Cys Tyr Gly Tyr Asp Leu Asn Ser Pro Tyr Val Trp Ser			
195	200	205	
tca ccc agt gat ctc ctg gag ctc ctg gtc cca ggt gtt tct aag aag			672
Ser Pro Ser Asp Leu Leu Glu Leu Leu Val Pro Gly Val Ser Lys Lys			
210	215	220	
cca tca ctc tca gtg cag ccg ggt cct gtc atg gcc cct ggg gaa agc			720
Pro Ser Leu Ser Val Gln Pro Gly Pro Val Met Ala Pro Gly Glu Ser			
225	230	235	240
ctg acc ctc cag tgt gtc tct gat gtc ggc tat gac aga ttt gtt ctg			768

Leu Thr Leu Gln Cys Val Ser Asp Val Gly Tyr Asp Arg Phe Val Leu	
245 250 255	
tac aag gag ggg gaa cgt gac ctt cgc cag ctc cct ggc cgg cag ccc	816
Tyr Lys Glu Gly Glu Arg Asp Leu Arg Gln Leu Pro Gly Arg Gln Pro	
260 265 270	
cag gct ggg ctc tcc cag gcc aac ttc acc ctg ggc cct gtg agc cgc	864
Gln Ala Gly Leu Ser Gln Ala Asn Phe Thr Leu Gly Pro Val Ser Arg	
275 280 285	
tcc tac ggg ggc cag tac aga tgc tac ggt gca cac aac ctc tcc tct	912
Ser Tyr Gly Gly Gln Tyr Arg Cys Tyr Gly Ala His Asn Leu Ser Ser	
290 295 300	
gag tgc tcg gcc ccc agc gac ccc ctg gac atc ctg atc aca gga cag	960
Glu Cys Ser Ala Pro Ser Asp Pro Leu Asp Ile Leu Ile Thr Gly Gln	
305 310 315 320	
atc cgt ggc aca ccc ttc atc tca gtg cag cca ggc ccc aca gtg gcc	1008
Ile Arg Gly Thr Pro Phe Ile Ser Val Gln Pro Gly Pro Thr Val Ala	
325 330 335	
tca gga gag aac gtg acc ctg ctg tgt cag tca tgg cgg cag ttc cac	1056
Ser Gly Glu Asn Val Thr Leu Leu Cys Gln Ser Trp Arg Gln Phe His	
340 345 350	
act ttc ctt ctg acc aag gcg gga gca gct gat gcc cca ctc cgt cta	1104
Thr Phe Leu Leu Thr Lys Ala Gly Ala Ala Asp Ala Pro Leu Arg Leu	
355 360 365	
aga tca ata cac gaa tat cct aag tac cag gct gaa ttc ccc atg agt	1152
Arg Ser Ile His Glu Tyr Pro Lys Tyr Gln Ala Glu Phe Pro Met Ser	
370 375 380	
cct gtg acc tca gcc cac gcg ggg acc tac agg tgc tac ggc tca ctc	1200
Pro Val Thr Ser Ala His Ala Gly Thr Tyr Arg Cys Tyr Gly Ser Leu	
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aac tcc gac ccc tac ctg ctg tct cac ccc agt gag ccc ctg gag ctc	1248
Asn Ser Asp Pro Tyr Leu Leu Ser His Pro Ser Glu Pro Leu Glu Leu	
405 410 415	
gtg gtc tca gga ccc tcc atg ggt tcc agc ccc cca ccc acc ggt ccc	1296
Val Val Ser Gly Pro Ser Met Gly Ser Ser Pro Pro Pro Thr Gly Pro	
420 425 430	
atc tcc aca cct ggc cct gag gac cag ccc ctc acc ccc act ggg tcg	1344
Ile Ser Thr Pro Gly Pro Glu Asp Gln Pro Leu Thr Pro Thr Gly Ser	
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gat ccc caa agt ggt ctg gga agg cac ctg ggg gtt gtg atc ggc atc	1392
Asp Pro Gln Ser Gly Leu Gly Arg His Leu Gly Val Val Ile Gly Ile	
450 455 460	

ttg	gtg	gcc	gtc	gtc	cta	ctg	ctc	ctc	ctc	ctc	ctc	ctc	ctc	ctc	ctc	ctc	ttc	ctc	1440
Leu	Val	Ala	Val	Val	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Phe	Leu	
465						470					475							480	

atc	ctc	cga	cat	cga	cgt	cag	ggc	aaa	cac	tgg	aca	tcg	acc	cag	aga	1488
Ile	Leu	Arg	His	Arg	Arg	Gln	Gly	Lys	His	Trp	Thr	Ser	Thr	Gln	Arg	
				485					490					495		

aag	gct	gat	ttc	caa	cat	cct	gca	ggg	gct	gtg	ggg	cca	gag	ccc	aca	1536
Lys	Ala	Asp	Phe	Gln	His	Pro	Ala	Gly	Ala	Val	Gly	Pro	Glu	Pro	Thr	
			500					505					510			

gac	aga	ggc	ctg	cag	tgg	agg	tcc	agc	cca	gct	gcc	gac	gcc	cag	gaa	1584
Asp	Arg	Gly	Leu	Gln	Trp	Arg	Ser	Ser	Pro	Ala	Ala	Asp	Ala	Gln	Glu	
		515					520					525				

gaa	aac	ctc	tat	gct	gcc	gtg	aag	gac	aca	cag	cct	gaa	gat	ggg	gtg	1632
Glu	Asn	Leu	Tyr	Ala	Ala	Val	Lys	Asp	Thr	Gln	Pro	Glu	Asp	Gly	Val	
	530					535					540					

gag	atg	gac	act	cgg	gct	gct	gca	tct	gaa	gcc	ccc	cag	gat	gtg	acc	1680
Glu	Met	Asp	Thr	Arg	Ala	Ala	Ala	Ser	Glu	Ala	Pro	Gln	Asp	Val	Thr	
545					550				555					560		

tac	gcc	cag	ctg	cac	agc	ttg	acc	ctc	aga	cgg	aag	gca	act	gag	cct	1728
Tyr	Ala	Gln	Leu	His	Ser	Leu	Thr	Leu	Arg	Arg	Lys	Ala	Thr	Glu	Pro	
				565					570					575		

cct	cca	tcc	cag	gaa	agg	gaa	cct	cca	gct	gag	ccc	agc	atc	tac	gcc	1776
Pro	Pro	Ser	Gln	Glu	Arg	Glu	Pro	Pro	Ala	Glu	Pro	Ser	Ile	Tyr	Ala	
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Thr	Leu	Ala	Ile	His		
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<212> PRT

<213> Human Immunoglobulin-Like Transcript

<400> 381

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Pro	Arg	Thr	Arg	Val	Gln	Thr	Gly	Thr	Ile	Pro	Lys	Pro	Thr	Leu	Trp
			20					25					30		

Ala Glu Pro Asp Ser Val Ile Thr Gln Gly Ser Pro Val Thr Leu Ser  
35 40 45

Cys Gln Gly Ser Leu Glu Ala Gln Glu Tyr Arg Leu Tyr Arg Glu Lys  
50 55 60

Lys Ser Ala Ser Trp Ile Thr Arg Ile Arg Pro Glu Leu Val Lys Asn  
65 70 75 80

Gly Gln Phe His Ile Pro Ser Ile Thr Trp Glu His Thr Gly Arg Tyr  
85 90 95

Gly Cys Gln Tyr Tyr Ser Arg Ala Arg Trp Ser Glu Leu Ser Asp Pro  
100 105 110

Leu Val Leu Val Met Thr Gly Ala Tyr Pro Lys Pro Thr Leu Ser Ala  
115 120 125

Gln Pro Ser Pro Val Val Thr Ser Gly Gly Arg Val Thr Leu Gln Cys  
130 135 140

Glu Ser Gln Val Ala Phe Gly Gly Phe Ile Leu Cys Lys Glu Gly Glu  
145 150 155 160

Asp Glu His Pro Gln Cys Leu Asn Ser Gln Pro His Ala Arg Gly Ser  
165 170 175

Ser Arg Ala Ile Phe Ser Val Gly Pro Val Ser Pro Asn Arg Arg Trp  
180 185 190

Ser His Arg Cys Tyr Gly Tyr Asp Leu Asn Ser Pro Tyr Val Trp Ser  
195 200 205

Ser Pro Ser Asp Leu Leu Glu Leu Leu Val Pro Gly Val Ser Lys Lys  
210 215 220

Pro Ser Leu Ser Val Gln Pro Gly Pro Val Met Ala Pro Gly Glu Ser  
225 230 235 240

Leu Thr Leu Gln Cys Val Ser Asp Val Gly Tyr Asp Arg Phe Val Leu  
245 250 255

Tyr Lys Glu Gly Glu Arg Asp Leu Arg Gln Leu Pro Gly Arg Gln Pro  
260 265 270

Gln Ala Gly Leu Ser Gln Ala Asn Phe Thr Leu Gly Pro Val Ser Arg  
275 280 285

Ser Tyr Gly Gly Gln Tyr Arg Cys Tyr Gly Ala His Asn Leu Ser Ser  
290 295 300

Glu Cys Ser Ala Pro Ser Asp Pro Leu Asp Ile Leu Ile Thr Gly Gln  
305 310 315 320

Ile Arg Gly Thr Pro Phe Ile Ser Val Gln Pro Gly Pro Thr Val Ala  
325 330 335

Ser Gly Glu Asn Val Thr Leu Leu Cys Gln Ser Trp Arg Gln Phe His  
340 345 350

Thr Phe Leu Leu Thr Lys Ala Gly Ala Ala Asp Ala Pro Leu Arg Leu  
355 360 365

Arg Ser Ile His Glu Tyr Pro Lys Tyr Gln Ala Glu Phe Pro Met Ser  
370 375 380

Pro Val Thr Ser Ala His Ala Gly Thr Tyr Arg Cys Tyr Gly Ser Leu  
385 390 395 400

Asn Ser Asp Pro Tyr Leu Leu Ser His Pro Ser Glu Pro Leu Glu Leu  
405 410 415

Val Val Ser Gly Pro Ser Met Gly Ser Ser Pro Pro Pro Thr Gly Pro  
420 425 430

Ile Ser Thr Pro Gly Pro Glu Asp Gln Pro Leu Thr Pro Thr Gly Ser  
435 440 445

Asp Pro Gln Ser Gly Leu Gly Arg His Leu Gly Val Val Ile Gly Ile  
450 455 460

Leu Val Ala Val Val Leu Leu Leu Leu Leu Leu Leu Leu Phe Leu  
465 470 475 480

Ile Leu Arg His Arg Arg Gln Gly Lys His Trp Thr Ser Thr Gln Arg  
485 490 495

Lys Ala Asp Phe Gln His Pro Ala Gly Ala Val Gly Pro Glu Pro Thr  
500 505 510

Asp Arg Gly Leu Gln Trp Arg Ser Ser Pro Ala Ala Asp Ala Gln Glu  
515 520 525

Glu Asn Leu Tyr Ala Ala Val Lys Asp Thr Gln Pro Glu Asp Gly Val  
530 535 540

Glu Met Asp Thr Arg Ala Ala Ala Ser Glu Ala Pro Gln Asp Val Thr  
545 550 555 560

Tyr Ala Gln Leu His Ser Leu Thr Leu Arg Arg Lys Ala Thr Glu Pro  
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Pro Pro Ser Gln Glu Arg Glu Pro Pro Ala Glu Pro Ser Ile Tyr Ala  
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Thr Leu Ala Ile His  
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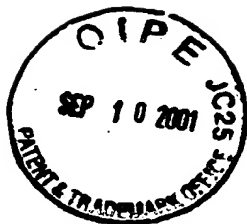


Exhibit D